Ont.
Legislative Assembly

SESSIONAL PAPERS

VOL. L.—PART VI.

FOURTH SESSION

OF THE

FOURTEENTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO

155013
11/5/20

SESSION 1918

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
THE RYERSON PRESS

LIST OF SESSIONAL PAPERS

PRESENTED TO THE HOUSE DURING THE SESSION.

TITLE.	No.	REMARKS.
Accounts, Public, 1917	1	*Printed.*
Agricultural College, Report	30	"
Agricultural and Experimental Union, Report	32	"
Agricultural Societies, Report	42	"
Agriculture, Department of, Report	29	"
Archivist, Report	52	"
Auditor, Provincial, Report	54	"
Bee-Keepers, Report	37	*Printed.*
Births, Marriages and Deaths, Report	20	"
Birth, Marriages and Deaths, number of copies of Report published, etc.	87	*Not Printed.*
Budget Speech	80	*Printed.*
Burwash Farm, Coatsworth's Report	56	*Not Printed.*
Canadian Copper Company, lands patented to	73	*Not Printed.*
Children, Neglected, Report	27	*Printed.*
Civil Servants, employed on Farms	86	*Not Printed.*
Corn Growers' Association, Report	35	*Printed.*
Dairymen's Association, Report	38	*Printed.*
Division Courts, Report	5	"
Education, Report	17	*Printed.*
Education, Orders-in-Council	66	*Not Printed.*
Elections, Memorandum *in re*	51	"
Entomological Society, Report	36	*Printed.*
Estimates	2	"
Factories, Report (*not presented*)	47	*Part of No. 16*
Farmers' Institutes, Report (*not presented*)	40	*Dropped.*
Feeble-Minded, Report (*not presented*)	24	*Part of No. 23*
Forest Reserves, Sections over-run by fire	60	*Not Printed.*
Friendly Societies, Report	11	*Printed.*
Fruit Growers, Report	44	"
Fur-bearing Animals, Pelts of, etc.	84	*Not Printed.*
Game and Fish, Report	14	*Printed.*
Gaols, Prisons and Reformatories, Report	26	"
Grand River, correspondence *re* Floods	75	*Not Printed.*

Title.	No.	Remarks.
Health, Report of Board of	21	*Printed.*
Highway Improvement, Report	15	"
Hodge, John E., Lands granted to	71	*Not Printed.*
Hodgins, Justice, Report	57	*Printed.*
Horticultural Experiment Station, Vineland, Report	45	"
Horticultural Societies, Report	43	"
Hospitals and Charities, Report	25	"
Hospitals, Refuges, Orphanages, Orders-in-Council	83	*Not Printed.*
Hydro-Electric Power Commission, Report	49	*Printed.*
Hydro-Radial, Toronto to N. Falls, Order-in-Council	58	*Not Printed.*
Idiots and Epileptics, Report	23	*Printed.*
Industrial Farm, Burwash, Report	56	*Not Printed.*
Industries, Bureau of, Report	46	*Printed.*
Insane, Hospitals for, Report	22	"
Insurance, Report	10	"
Kingston Asylum, correspondence *re* Land Purchase	77	*Not Printed.*
Labour, Trades and, Report	16	*Printed.*
Lands, Forests and Mines, Report	3	"
Legal Offices, Report	6	"
Librarian, Report	53	*Not Printed.*
Liquor License Acts, Report	28	*Printed.*
Live Stock Association, Report	39	"
Loan Corporations, Statements	12	"
Mail Delivery, Contract for	70	*Not Printed.*
Medical Education, Hodgins Report	57	*Printed.*
Mines, Report	4	"
Mines Act, Patents granted in Sudbury	61	*Not Printed.*
Moyes, John W., Correspondence	65	"
Municipal Affairs, Report	82	"
Municipal Auditor, Report	8	*Printed.*
Natural Gas, situation in Kent	78	*Printed.*
Ontario Parole Board	79	*Not Printed.*
Ontario, Population and Public Debt	63	"
Ontario Railway and Municipal Board, Report	50	*Printed.*
Parole, Ontario Board	79	*Not Printed.*
Prisons and Reformatories, Report	26	*Printed.*
Provincial Auditor, Report	54	"
Provincial Municipal Auditor, Report	8	"
Public Accounts, 1917	1	"

Title.	No.	Remarks.
Public Highways, Report	15	*Printed.*
Public Works, Report	13	"
Queen Victoria Niagara Falls Park, Report	9	*Printed.*
Railway and Municipal Board, Report	50	*Printed.*
Registrar-General, Report	20	"
Registry Offices, Report	7	"
Secretary and Registrar, Report	19	*Printed.*
Seymour Power Company, purchase of	62	*Not Printed.*
Soldiers' Aid Commission, Report	85	"
Stallion Enrolment Board, Report	33	*Printed.*
Statute distribution	67	*Not Printed.*
Sudbury District, Lands Patented in	69	"
Sudbury Nickel, Ltd., Lands Patented to	72	"
Surrogate Courts, Orders-in-Council	68	"
Taylor, Archibald, correspondence	64	*Not Printed.*
Telephone Systems, Statistical Information	81	*Printed.*
Temiskaming and N. O. Railway, Report	48	"
Toronto University, Report	18	"
Vegetable Growers' Association, Report	34	*Printed.*
Venereal Diseases, Hodgins Report	74	"
Veterinary College, Report	31	"
Vineland Station, Report	45	"
Water-Powers, Leases issued	59	*Not Printed.*
Women's Institutes, Report	41	*Printed.*
Workmen's Compensation Board, Report	55	"
Workmen's Compensation Board, correspondence *re* Taylor	64	*Not Printed.*
Workmen's Compensation Board, amount paid in by Corporations	76	"

LIST OF SESSIONAL PAPERS

Arranged in Numerical Order with their Titles at full length; the dates when presented to the Legislature; the name of the Member who moved the same, and whether ordered to be Printed or not.

CONTENTS OF PART I.

No. 1 Public Accounts of the Province for the year ending 31st October, 1917. Presented to the Legislature, February 12th, 1918. *Printed.*

No. 2 Estimates—Supplementary, for service of the Province for the year ending 31st October, 1918. Presented to the Legislature, February 12th, 1918. *Printed.* Further Supplementary. Presented to the Legislature, February 27th, 1918. *Printed.* Estimates for the year ending 31st October, 1919. Presented to the Legislature, March 8th, 1918. *Printed.*

CONTENTS OF PART II.

No. 3 Report of the Minister of Lands, Forests and Mines for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 4 Report of the Bureau of Mines for the year 1917. Presented to the Legislature, March 15th, 1918. *Printed.*

CONTENTS OF PART III.

No. 5 Report of the Inspector of Division Courts for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 6 Report of the Inspector of Legal Offices for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 7 Report of the Inspector of Registry Offices for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 8 Report of the Provincial Municipal Auditor for the year 1917. Presented to the Legislature, March 21st, 1918. *Printed.*

No. 9 Report of the Queen Victoria Niagara Falls Park Commission, for the year 1917. Presented to the Legislature, February 25th, 1918. *Printed.*

No. 10 Report of the Inspector of Insurance for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 11 Report of the Registrar of Friendly Societies for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

CONTENTS OF PART IV.

No. 12 Loan Corporations—Financial Statements made by Building Societies, Loan Companies, Loaning, Land and Trust Companies, for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 13 Report of the Minister of Public Works for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

No. 14 Report of the Department of Game and Fisheries for the year 1917. Presented to the Legislature, March 12th, 1918. *Printed.*

No. 15 Report on Highway Improvement for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 16 Report of the Trades and Labour Branch for the year 1917. Presented to the Legislature, March 7th, 1918. *Printed.*

CONTENTS OF PART V.

No. 17 Report of the Minister of Education for the year 1917. Presented to the Legislature, March 7th, 1918. *Printed.*

No. 18 Report of the Board of Governors of the University of Toronto for the year 1917. Presented to the Legislature, February 6th, 1918. *Printed.*

No. 19 Report of the Secretary and Registrar of the Province for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 20 Report of the Registrar General on Births, Marriages and Deaths for the year 1917. Presented to the Legislature, February 26th, 1918. *Printed.*

CONTENTS OF PART VI.

No. 21 Report of the Provincial Board of Health for the year 1917. Presented to Legislature, February 20th, 1918. *Printed.*

No. 22 Report upon the Hospitals for the Insane for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 23 Report upon the Hospitals for Idiots and Epileptics, at Orillia and Woodstock, for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 24 Report upon the Feeble-minded, in Ontario, for the year 1917. *Printed. Part of No. 23.*

No. 25 Report upon Hospitals and Charitable Institutions of the Province for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 26 Report upon the Common Gaols, Prisons and Reformatories of the Province for the year 1917. Presented to the Legislature, March 18th, 1918. *Printed.*

No. 27 Report upon the Neglected and Dependent Children of the Province for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 28 Report on the operation of the Liquor License Acts in the Province for the year 1918. Presented to the Legislature, March 7th, 1918. *Printed.*

No. 29 Report of the Minister of Agriculture, for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 30 Report of the Ontario Agricultural College and Experimental Farm for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 31 Report of the Ontario Veterinary College for the year 1917. Presented to the Legislature, March 8th, 1918. *Not printed.*

No. 32 Report of the Ontario Agricultural and Experimental Union for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 33 Report of the Stallion Enrolment Board for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 34 Report of the Ontario Vegetable Growers' Association for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 35 Report of the Ontario Corn Growers' Association for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

CONTENTS OF PART VII.

No. 36 Report of the Entomological Society of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 37 Report of the Bee-Keepers' Association of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 38 Report of the Dairymen's Association of Ontario for the year 1917. Presented to the Legislature, March 28th, 1918. *Printed.*

No. 39 Report of the Live Stock Association of Ontario for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 40 Report of the Farmers' Institutes of Ontario for the year 1917. *Dropped.*

No. 41 Report of the Women's Institutes of Ontario for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 42 Report of the Agricultural Societies of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 43 Report of the Horticultural Societies of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 44 Report of the Fruit Growers' Association of Ontario for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 45 Report of the Vineland Horticultural Experiment Station for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

No. 46 Report of the Bureau of Industries of the Province for the year 1917. Presented to the Legislature, March 8th, 1918. *Printed.*

CONTENTS OF PART VIII.

No. 47 Report of the Factories Inspectors of the Province for the year 1917. Not presented. *Printed. Part of No. 16.*

No. 48 Report of the Temiskaming and Northern Ontario Railway Commission for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 49 Report of the Hydro-Electric Power Commission for the year 1917. Presented to the Legislature, March 20th, 1918. *Printed.*

CONTENTS OF PART IX.

No. 50 Report of the Ontario Railway and Municipal Board for the year 1917. Presented to the Legislature, March 11th, 1918. *Printed.*

No. 51 Memorandum *re* Elections—Presented to the Legislature. February 5th, 1918. *Not printed.*

No. 52 Report of the Provincial Archivist for the year 1917. Presented to the Legislature, March 1st, 1918. *Printed.*

No. 53 Report of the Librarian on the State of the Library. Presented to the Legislature, February 7th, 1918. *Not printed.*

No. 54 Report of the Provincial Auditor for the year 1917. Presented to the Legislature, February 21st, 1918. *Printed.*

No. 55 Report of the Ontario Workmen's Compensation Board for the year 1917. Presented to the Legislature, March 21st, 1918. *Printed.*

No. 56 Report of Commissioner Coatsworth *re* Industrial Farm investigation at Burwash, Ontario. Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 57 Report and supporting statements on Medical Education in Ontario, by Mr. Justice Hodgins, Commissioner. Presented to the Legislature, February 6th, 1918. *Printed.*

No. 58 Return to an Address to His Honour the Lieutenant-Governor, of the 20th March, 1917, praying that he will cause to be laid before the House—1. Copies of all Orders-in-Council approving of the agreement for the construction of the Hydro Radial Line from Toronto to Niagara Falls through Hamilton. 2. Copies of all reports, engineers' and otherwise, in reference to the cost and prospective earnings of the said railway furnished by the Hydro-Electric Power Commission to the Government. 3. Copies of all correspondence passing between the Hydro-Electric Power Commission and the Government in reference to the passing of the said Orders-in-Council and the construction of the said line. Mr. *Marshall.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 59 Return to an Order of the House of the 26th March, 1917, for a Return shewing:—1. How many leases of water-powers were issued by the Ontario Government in each of the years 1912, 1913, 1914, 1915, 1916 and down to March 1st, 1917. 2. To whom, in what districts, and for what periods of time were such leases of water-powers issued. Mr. *Dewart.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 60 Return to an Order of the House of the 7th March, 1917, for a Return shewing:—1. What areas of land of the Government of the Province of Ontario in Forest Reserve sections were overrun by fire in the years 1910, 1911, 1912, 1913, 1914, 1915 and 1916 respectively. Mr. *Ducharme.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 61 Return to an Order of the House of the 7th March, 1917, for a Return shewing:—1. How many patents of lands have been issued, under the Mines Act, in the District of Sudbury, to corporations, since February 8, 1905, in addition to the six patents of land issued to the Canada Copper Company on the 13th day of December, 1916. 2. To what corporations were such patents issued; on what dates; and in what townships were the lands situated. 3. Were the regulations with regard to timber preservation taken advantage of by those who staked claims, and were they so relieved from doing the necessary

development work required by the Mining Law of Ontario. If so, in what cases. Mr. *Dewart.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 62 Return to an Order of the House of the 23rd February, 1917, for a Return of Copies—1. All correspondence passing between the Government of Ontario, or any member, officer, or official thereof, and the Ontario Hydro-Electric Power Commission or any officer or official thereof, in reference to the purchase or acquirement of the properties of the Seymour Power Company. 2. All reports made by the Hydro-Electric Power Commission, or any member, officer or official thereof, in reference to the purchase of the properties of the said Seymour Power Company. 3. All valuations made by or on behalf of the Hydro-Electric Power Commission of the properties of the said Seymour Power Company. 4. All correspondence between the Government of the Province of Ontario, or any member, officer, or official thereof, and the Government of the Dominion of Canada, or any officer, or official thereof, in reference to the purchase or acquirement of the properties of the Seymour Power Company. Mr. *Carter.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 63 Return to an Order of the House of the 16th March, 1917, for a Return shewing:—1. What was the population of Ontario for each of the years from the year 1900 to 1916 inclusive. 2. What was the public debt of the Province of Ontario from the year 1900 to the year 1916 inclusive. 3. What was the public debt *per capita* for each of the years from the year 1900 to the year 1916 inclusive. Mr. *Pinard.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 64 Return to an Order of the House of the 14th March, 1917, for a Return of copies of all documents and correspondence passing between the Workmen's Compensation Board or any member, officer or employee thereof; the personal representatives of Archibald Taylor (deceased), late of Sarnia, Ont., or any person or persons acting on their behalf, and the Grand Trunk Railway Company or any employee or officer thereof. Mr. *Elliott.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 65 Return to an Order of the House of the 5th March, 1917, for a Return of—1. Copies of all correspondence, reports and documents in any way relating to the attempted arrest of one John W. Moyes. 2. What steps have been taken to effect such arrest and if it is the intention of the Government to continue its efforts to bring about the arrest of the said John W. Moyes. Mr. *Proudfoot.* Presented to the Legislature, February 6th, 1918. *Not printed.*

No. 66 Copies of Regulations and Orders-in-Council as required by Section 27 of the Department of Education Act. Presented to the Legislature, February 13th, 1918. *Not printed.*

No. 67 Statement *re* distribution of Revised and Sessional Statutes for the year 1917. Presented to the Legislature, February 20th, 1918. *Not printed.*

No. 68 Copies of Orders-in-Council in accordance with the provisions of ss. 6 of section 78 of the Surrogate Courts Act. Presented to the Legislature, February 26th and March 21st, 1918. *Not printed.*

No. 69 Return to an Order of the House, of the 25th February, 1918, for a Return shewing—1. What lands, if any, have been patented in the District of Sudbury, in the year 1917, to the following persons, respectively, Albert Harvey, Rinaldo McConnell, Alex. H. Beath and R. J. Tough. 2. On what dates were the said lands, if any, patented. 3. Have any terms been imposed in the Patents granted for any such lands so as to insure the treatment and refining of the Nickel Ores mined upon these properties in the Province of Ontario. 4. Is there any agreement or obligation on the part of the Company in question to which any such lands have been granted, which obligates them to carry on mining or other obligations, in the Province of Ontario, and if so what are the agreements or obligations and within what time limit must they be performed. Mr. *Dewart.* Presented to the Legislature, February 26th, 1918. *Not printed.*

No. 70 Contract of Agreement made with the Mounce Cartage Company, Limited, relating to the delivery of mail matter to and from the Toronto Post Office and the Parliament Buildings. Presented to the Legislature, February 27th, 1918. *Not printed.*

No. 71 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands in the District of Sudbury, if any, have been granted to "John E. Hodge," of Minneapolis, Minn., in the U.S.A., since the 1st of March, 1917. 2. Is the said "John E. Hodge" connected with or representing any corporate interests, to the knowledge of the Government, and if so, what is the name of the corporation, and who are its officers. 3. Have any terms been imposed in such patents as have been granted, so as to ensure the treatment and the refining of the nickel ores mined upon this property in the Province of Ontario. 4. Is there any agreement, or obligation on the part of the grantees in question, obligating them to carry on mining or other operations in the Province of Ontario, and if so what are the agreements and obligations, and within what time limit must they be performed. Mr. *Dewart.* Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 72 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands, if any, have been patented in the District of Sudbury to "Sudbury Nickel, Limited," in the year 1917, and on what dates. 2. When was this company incorporated, with what share capital, and with what provisional directors. 3. What stock of the company has been issued (*a*) for cash; (*b*) for transfer of properties or claims, and to whom. 4. Who are the present directors of the company. 5. Have any terms been imposed in the patents granted for any such lands, so as to ensure the treatment and refining of the nickel ores mined upon any such properties in the Province of Ontario. 6. Is there any agreement or obligation on the part of the company in question to whom any such lands have been granted, which obligates them to carry on mining or other operations in the Province of Ontario, and if so what are the agreements or obligations, and within what time limit must they be performed. Mr. *Dewart*. Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 73 Return to an Order of the House of the 26th February, 1918, for a Return shewing—1. What lands, if any, have been patented to the Canadian Copper Company in 1917, and at what dates. 2. Has the Government attached any restrictions to the patents granted to the said company, or taken any steps to ensure that the nickel recovered from the properties so granted shall be refined or otherwise treated in the Province of Ontario. Mr. *Dewart*. Presented to the Legislature, March 1st, 1918. *Not printed.*

No. 74 Interim Report on Venereal Diseases, with copy of an Act for the Prevention of Venereal Disease, by Mr. Justice Hodgins, Commissioner. Presented to the Legislature, March 5th, 1918. *Printed.*

No. 75 Return to an Order of the House of the 7th March, 1918, for a Return shewing—1. Copies of all correspondence between the Minister of Public Works, or any other members of the Government, or any official thereof, and any person or persons, and copies of any reports received by the Government, relating to the floods on the Grand River, since the return brought down by the House on the 3rd of April, 1913, being a preliminary study of the subject by H. G. Acres of the Hydro-Electric Power Commission. Mr. *Ham*. Presented to the Legislature, March 8th, 1918. *Not printed.*

No. 76 Return to an Order of the House of 25th February, 1918, for a Return shewing—1. What was the amount paid in by each of the following corporations in the year 1917, or the last period of twelve months for which returns are made, for all purposes under the Workmen's Compensation Act, namely: Massey-

Harris Co., Ltd., John Inglis Co., Ltd., Toronto Carpet Mfg Co., Harris Abattoir Co., Ltd., Park, Blackwell Co., Ltd., Dominion Radiator Co., Ltd. 2 What amount was paid out in the same period under the Act to the employees of each of the said companies, for claims made for injuries during the said period. 3. What amount, if any, was held, under the Act, for further payments on claims made in the same period for injuries by such employees of each of the said companies. Mr. *Dewart.* Presented to the Legislature, March 11th, 1918. *Not printed.*

No. 77 Return to an Order of the House of the 27th February, 1918, for a Return shewing—1. Copies of all correspondence between the Government, or any officer or official thereof, and any person or persons, in reference to the purchase of additional land and the erection of buildings thereon, and all items in connection therewith, referred to in Vote No. 156, relating to the Hospital for the Insane, Kingston, appearing on Page 35 of the Supplementary Estimates for the Fiscal Year ending October 31st, 1918. Mr. *Dewart.* Presented to the Legislature, March 11th, 1918. *Not printed.*

No. 78 Memorandum on the Natural Gas Situation in Kent, Essex and Lambton. Presented to the Legislature, March 15th, 1918. *Printed.*

No. 79 Report on the Ontario Parole Board for the year 1916-17. Presented to the Legislature, March 20th, 1918. *Printed.*

No. 80 Budget Speech of the Provincial Treasurer, delivered in the House on the 12th February, 1918. *Not presented. Printed.*

No. 81 Telephone Systems—Statistical information and Acts relating to. *Not presented. Printed.*

No. 82 Report of Bureau of Municipal Affairs for the year 1917. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 83 Order-in-Council of 21st March, 1918, designating the Hospitals, Refuges, Orphanages and Infants' Homes, to which aid may be granted under the Hospitals and Charitable Institutions Act. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 84 Return to an Order of the House of the 7th March, 1917, for a Return shewing—1. What was the number and kind of pelts or skins of fur-bearing animals coming into the possession of the Government of the Province of Ontario during the years 1910, 1911, 1912, 1913, 1914, 1915, and 1916, respectively, because of violation of any law or laws relating to fur-bearing animals. 2. What disposition of such pelts or skins has been made by the Government. 3. And what price or prices for

each kind of fur, and to whom have the aforesaid pelts or skins been disposed of by the Government. Mr. *Ferguson* (Kent). Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 85 Report of the Soldiers' Aid Commission of Ontario for the year 1917. Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 86 Return to an Order of the House of the 6th March, 1918, for a Return shewing—1. How many civil servants were released during the past year for work on Ontario farms. 2. What are the names of such employees. 3. How long were they so employed. 4. What are the names of the parties by whom they were employed. Mr. *Ham.* Presented to the Legislature, March 21st, 1918. *Not printed.*

No. 87 Return to an Order of the House of the 20th March, 1918, for a Return shewing—1 (*a*) How many copies of the Report relating to the registration of births, marriages and deaths in the province for the year 1916, were published. (*b*) How many were distributed. 2. What was the cost of printing and publication. 3 (*a*) How much would the cost have been reduced if the Report had been confined to the first 57 pages. (*b*) How much, if confined to the first 154 pages. 4. How many officials and clerks were employed in the preparation of the copy of the said Report for the printer, and for what approximate time and at what estimated cost. Mr. *Dewart.* Presented to the Legislature, March 21st, 1918. *Not printed.*

Thirty-Sixth Annual Report

OF THE

Provincial Board of Health

OF

Ontario, Canada

FOR THE YEAR

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.R.V.O., etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I herewith beg to present for your consideration the Thirty-sixth Annual Report of the Provincial Board of Health for the year 1917.

Respectfully submitted,

Wm. David McPherson,

Provincial Secretary.

To the Honourable W. D. McPherson, K.C., M.P.P., Provincial Secretary of Ontario.

Sir,—I have the honour to submit for your approval the Thirty-sixth Annual Report of the Provincial Board of Health, made in conformity with and under the provisions of the Public Health Act, for the year 1917.

I have the honour to be, Sir,

Your obedient servant,

John W. S. McCullough,

Chief Officer of Health.

PROVINCIAL BOARD OF HEALTH OF ONTARIO

1917

The Board:

ADAM H. WRIGHT, M.D., M.R.C.S., Eng., Chairman ..... Toronto.
HENRY R. CASGRAIN, M.D. ..... Windsor.
THOMAS E. KAISER, M.D. ..... Oshawa.
WILLIAM H. HOWEY, M.D. ..... Sudbury.
ARTHUR S. MCELROY, M.D. ..... Ottawa.
JAMES ROBERTS, M.D., M.O.H. ..... Hamilton.

Executive Officers:

JOHN W. S. MCCULLOUGH, M.D., D.P.H. (Tor.), Secretary and Chief Officer of Health.
R. W. BELL, M.D., Provincial Medical Inspector.
ALEX. R. WHITE, Sanitary Inspector, North Bay.

Laboratory Service:

JOHN A. AMYOT, M.B., C.M.G., Provincial Bacteriologist, Professor of Hygiene, University of Toronto.
H. M. LANCASTER, B.A.Sc., Provincial Chemist, Professor of Chemistry, Dental College, University of Toronto.
R. W. NAYLOR, M.B., Assistant Bacteriologist.
A. R. BONHAM, B.A.Sc., Assistant Chemist.
W. T. CONNELL, M.D., Branch Laboratory, Kingston.
H. W. HILL, M.D., D.P.H. (Tor.), Branch Laboratory, London.

Engineering Service:—

F. A. DALLYN, C.E. (Tor.), A.M. Can. Soc. C.E., Provincial Sanitary Engineer.
A. V. DELAPORTE, B.A.Sc., Chemist in Charge of Experimental Station.

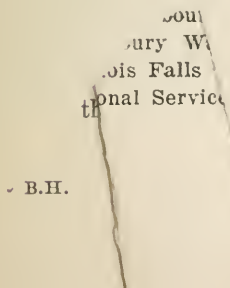
Child Welfare Bureau:

Miss Mary Power, B.A.

District Officers of Health:

District.
No. 1.—Vacant by the death of MAJOR D. B. BENTLEY, M.D., Sarnia.
No. 2.—THOMAS J. MCNALLY, M.D., London.
No. 3.—DANIEL A. MCCLENAHAN, M.D., Hamilton.
No. 4.—GEORGE CLINTON, M.D., Belleville.
No. 5.—PAUL J. MOLONEY, M.D., Cornwall.
No. 6.—W. EGERTON GEORGE, M.D., North Bay.
No. 7.—ROBERT E. WODEHOUSE, M.D., Fort William.

Telephone No. Main 5800.



CONTENTS.

PAGE

1. Resume of the Transactions of the Board, 1917 1

2. Table of Deaths from Tuberculosis by Ages, 1908-1918 4

3. Monthly Reports of Communicable Diseases, 1917 5

4. Statement of Biological Products, 1916-1917 6

5. Distribution of Biological Products, 1916-1917 8

6. Report of Bureau of Child Welfare 25

7. Epidemiological Data 32
   - Paratyphoid Fever Epidemic in Brantford 32
   - Typhoid Fever in Drayton 33
   - Beta-Para-Typhoid Fever in Townships of Essa, Innisfil, Vespro and Oro 35
   - Typhoid Epidemic in Jordon Harbour 39
   - Epidemic of Scarlet Fever in Nobleton, S.S. No. 19 40
   - Acute Anterior Poliomyelitis at Rosemount 42
   - Case of Cerebro-Spinal Meningitis at South River 43
   - Epidemic of Diphtheria in Walkerville 44

8. Reports of District Officers of Health 47
   - District No. 1, Dr. T. J. McNally 47
   - District No. 2, Dr. T. J. McNally 47
   - District No. 3, Dr. D. A. McClenahan 49
   - District No. 4, Dr. George Clinton 51
   - District No. 5, Dr. Paul J. Moloney 54
   - District No. 6, Dr. W. Egerton George 58
   - District No. 7, Dr. W. Egerton George 59

9. Report of Provincial Sanitary Inspector, Alex. R. White 66

10. Report of Provincial Medical Inspector, Dr. R. W. Bell 74
    - Report *re* Nuisance at Doon 74
    - *Re* Summer Resorts 75

11. Report of the Provincial Sanitary Engineer, F. A. Dallyn, C.E. 77
    - Visit of Inspection to England 79
    - List of Municipalities in Ontario Using Chlorine to Protect Their Water Supplies 81
    - List of Municipal Filter Plants 82
    - Springs and Artesian Wells in Ontario 83
    - Water Supplies and Waterworks Extensions Approved in 1917 84
    - Sewage Disposal and Sewer Extensions Approved in 1917 85
    - Acton Tannery 86
    - Burlington Water Supply 86
    - Cobalt Water Supply 91
    - Depot Harbour Water Supply 96
    - Haileybury Water Supply 96
    - Iroquois Falls Water Supply 97
    - National Service Camps for Women 99

PAGE

Kingsville Water Supply 102
Kincardine Water Supply 104
Niagara-on-the-Lake Filter Units 105
Septic Tanks on Dean Property, Oakville 106
Listowel Water Supply 107
London Sanitarium Water Supply 107
Parry Sound Chlorination System 108
Port Dover Springs 109
Rockland Water Supply 109
Re Sturgeon Falls Pulp Waste 112

12. Report of the Laboratories of the Provincial Board of Health at Toronto for the Year 1917 115
Summary of Specimens Examined 118

13. Report of the Branch Laboratoty of the Board at London, 1917 149

14. Report of the Branch Laboratory of the Board at Kingston, 1917..... 157

15. Appendix "A":—
Reports of Local Boards of Health of Cities and Towns in Ontario 167

ANNUAL REPORT

OF THE

Provincial Board of Health for the Province of Ontario

For the Year Ending 31st December, 1917

RÉSUMÉ OF TRANSACTIONS OF THE BOARD BY THE CHIEF OFFICER OF HEALTH.

This is the 36th Annual Report of the Provincial Board of Health for the year ending on the 31st day of December, 1917.

All the members, with the exception of Lt.-Col. Casgrain, still on military duty in France, were in attendance at the meetings of the Board.

Legal Amendments and Regulations.

The only amendment to the Public Health Act passed in 1917, was Section 32a., as follows:—

> 32a.—In cities having a population of not less than 200,000 the local board may provide such dental and medical inspection of the pupils of all public schools as the regulations under the Department of Education Act may prescribe, and, in the absence of such regulations, as the local board may deem proper, and may execute, do and provide all such acts, matters and things as may be found necessary from such inspection.

No new regulations were passed during the year.

Free Distribution of Biological Products.

The policy inaugurated by the Board early in 1916 of distributing free to the public various antitoxins and sera, including diphtheria and tetanus antitoxins, triple (typhoid and paratyphoid) and small-pox vaccines, anti-meningitis serum, as well as the provision for free preventive Pasteur treatment in cases of suspected rabies has proven highly successful. The net cost was approximately $30,000. The service has been prompt and satisfactory in every part of the province, and it seems to be appreciated by both the general public and the medical practitioners of Ontario. It is probably too soon to say what effect this service will have upon the mortality of the various communicable diseases in which these remedies are used. Suffice it to say that the death-rate of diphtheria averaged 6.6 per cent. of cases for the year.

The Board desires to record its appreciation of the prompt and efficient service afforded by the Director of the Connaught Laboratories and his assistants, from which all the biological products except the triple (typhoid and paratyphoid) vaccine are procured. At all times, night or day, those in charge of the laboratories were ready and willing to dispatch supplies, and the satisfactory response to orders by telephone and telegraph from all quarters of Ontario may largely be attributed to the business-like activity of the officials of the laboratories. During the year the Board added to its supplies Pertussis Vaccine and a 1 per cent. solution of Silver Nitrate (put up in wax ampoules), both prepared in our own laboratory at No. 5 Queen's Park.

Military Supplies.

The Board has continued to supply, as usual free of cost, large quantities of triple (typhoid and paratyphoid) vaccine to the Department of Militia and Defence for the use of Canadian troops. The fact that the Canadian Army has had practically no typhoid or paratyphoid fever either here or abroad is the best evidence of successful results and the best reward the Board could claim.

The Connaught Laboratories.

The Connaught Laboratories, to which reference has already been made, and cuts of whose buildings appeared in the report of last year were formally opened in the autumn by his Excellency the Duke of Devonshire, Governor-General of Canada. On this occasion the Premier of Ontario announced that his Government, recognizing the value of these laboratories, in the protection of public health, had decided to contribute the annual income of $75,000 to the endowment. This will bring the endowment up to $100,000, thus providing a fund for valuable research work.

The Laboratories.

The Laboratories of the Board at Kingston, London, and Toronto continue to give excellent service. During the year a diagnostic service in venereal diseases was established at all three laboratories. Free outfits are supplied to physicians for the taking of specimens of blood in presumed syphilis cases, and of smears in cases of suspected gonorrhœa.

The general public health services of all our laboratories continue to be appreciated if we may judge by the constantly increasing specimens sent to them. A pamphlet, "Laboratory Service," giving full information is issued by the Board.

It is gratifying to note that the director of the Toronto Laboratory, Dr. John A. Amyot, has been for some time Chief Sanitary Advisor to the Canadian forces, and that early in the year he was honoured with the title of C.M.G.

Water Supplies and Sewerage.

Elsewhere is given in greater detail information respecting the construction of water and sewerage works during the year. Considerable important works of this character are established each year and their value in promoting the public health is undoubtedly very great.

The Experimental Plant.

Much valuable experimental work, considering our war-depleted staff, was carried out at the plant, reports of which will be found elsewhere.

The District Officers of Health.

It is with sincere regret that the Board announces the death at Granville Canadian Special Hospital, Ramsgate, Kent, England, of Major David B. Bentley, C.A.M.C., for some years District Officer of Health for No. 1 District. Major Bentley went overseas with the First Canadian Contingent in the autumn of 1914, in charge of an Ambulance Section, and suffered the severe hardships of the first two winters of the war. His health began to fail in the latter part of 1916, when he went into hospital. About the first of April, 1917, he developed pneumonia and died on the fifth. Major Bentley was an efficient medical officer and a fine soldier. The writer had known him since college days, and he ever remained of a bright, jovial and kindly disposition. His place will be hard to fill. At the latter end of 1916, Mr. George E. Young, sanitary inspector, was obliged, on account of illness, to relinquish his duties, and towards the end of the year he resigned, and Mr. Alex. R. White was appointed to fill his place.

Dr. R. E. Wodehouse has been continuously overseas since the beginning of the war. He has, after a long period of service in France, been acting as O.C. of a large convalescent home at Bearwood, Berks. His work in District No. 7 has been looked after by Dr. W. E. George, of District No. 6, while that of the late Major Bentley has been assumed by Dr. T. J. McNally. In both cases this duty is in addition to the regular duties of these officers.

The services of the various District Officers still on duty (five in all) have given a great deal of satisfaction, and the best proof of the value of the district system is the fact of its adoption in a large number of the states of the United States and of the Provinces of Canada.

Epidemiological Service.

Dr. W. C. Allison has given very valuable services in tracing the origin and causes of several outbreaks of typhoid, diphtheria, cerebro-spinal meningitis, and other affections. In this way he has proved of very great assistance to medical practitioners and the public.

Annual Conference of Health Officers.

This Conference continues to be very popular with our Medical Officers of Health. The meetings this year held in Toronto were well attended, the papers were of good quality and the discussions keen and interesting. The annual attendance remains about 300. As there are over 600 Medical Officers of Health in the Province, the attendance should be greater. It is noticeable, however, that those in attendance year after year are amongst the best and most progressive officers we have.

Child Welfare Bureau.

The Bureau has been very active during the year. Miss Power, the Director, organized a survey for the City of Hamilton, and with a corps of some twenty-five young ladies and the assistance of Nurses Knox and MacKay the history of some 23,000 births occurring in that city during the year 1915 was secured. The staff is working on the report of this survey, which we expect to have printed this year. During the year the Exhibit, comprising among other public health features, a very fair Child Welfare Section, was shown in several centres, and at the Canadian National Exhibition an extensive clinic was carried on. Our thanks in this respect are due to the Department of Health of the City of Toronto, which lent a number of its physicians, in whose hands the clinic was a decided success. Much more intensive effort is, however, necessary in order to improve Ontario's record in promoting child life. The subject is of such great importance, particularly in view of the losses sustained in war, that the protection of the health of women and children, like that of venereal diseases and tuberculosis is really a federal rather than a provincial problem, and Canada could well afford, and it would be money well-spent, to incur an annual outlay of $100,000 upon each of these public health problems. Yet the Federal Government spends little or nothing on any of them.

DEATHS IN ONTARIO FROM TUBERCULOSIS BY AGES, 1908-1918.

Year.	Total.	Ratio per 100,000	Under 5 years.					5-9	10-14	15-19	20-29	30-39	40-49	50-59	60-69	70-79	80 & over.	Not stated.	Total deaths from all causes.
			0-1	1	2	3	4												
	23,904		571	370	224	139	132	468	586	1,871	6,695	4,895	3,098	2,217	1,497	688	138	315	327,014
1908	2,511	112	68	46	20	13	13	43	67	216	764	479	315	217	136	70	14	30	30,947
1909	2,380	106	47	27	25	9	15	54	54	179	687	487	290	222	163	66	15	40	30,792
1910	2,291	102	38	35	19	15	6	36	55	184	652	463	293	222	160	71	18	24	31,332
1911	2,353	93	63	30	15	10	18	48	64	181	618	476	325	218	156	85	12	34	31,878
1912	2,250	87	53	30	19	9	15	46	42	154	631	500	304	200	134	64	7	42	32,150
1913	2,294	85	53	36	20	10	18	32	41	188	632	479	313	204	156	56	10	47	34,317
1914	2,340	85	54	41	20	16	11	56	58	181	688	469	307	214	116	63	12	34	32,440
1915	2,466	89	79	39	25	19	16	55	74	168	676	516	273	242	176	73	15	20	33,294
1916	2,559	92	66	43	35	19	9	53	61	224	683	536	327	238	156	68	17	24	35,580
1917	2,460	88	51	43	26	19	11	45	70	196	664	490	351	240	144	72	18	20	33,284

This Table was Compiled by the Registrar General's Department.

CASES AND DEATHS FROM COMMUNICABLE DISEASES BY MONTHS FOR THE YEAR 1917.

Months.	Smallpox.		Scarlet Fever.		Diphtheria.		Measles.		Whooping Cough.		Typhoid.		Tuberculosis.		Infantile Paralysis.		Cerebro-spinal Meningitis.	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January	9	.....	171	3	368	22	1,180	6	165	4	60	9	97	79	1	.....	12	8
February	6	.....	141	2	278	19	1,235	2	94	3	20	4	144	7	4	.....	16	12
March	13	.....	260	6	356	27	1,700	2	112	4	40	9	182	109	.....	.....	15	10
April	12	.....	197	3	223	20	842	5	76	2	36	6	165	96	1	.....	15	9
May	10	.....	200	2	198	9	663	3	88	1	184	6	151	75	1	1	5	5
June	13	.....	173	8	215	14	488	7	56	5	14	3	158	76	4	.....	12	1
July	21	.....	98	3	213	15	277	1	101	1	40	2	144	69	5	.....	1	1
August	16	.....	67	2	227	17	114	1	209	6	71	11	174	66	36	3	5	4
September	6	.....	98	1	316	15	104	.....	172	7	111	11	118	46	27	1	9	6
October	17	.....	130	2	375	20	141	1	98	6	69	5	160	68	14	4	2	.....
November	37	.....	188	.....	432	16	384	.....	142	9	37	6	101	52	7	1	14	5
December	65	.....	304	6	369	29	667	3	357	6	143	11	113	76	2	1	7	5
Totals	225	.....	2,027	38	3,590	223	7,795	31	1,670	54	825	83	1,707	819	102	11	113	66

Only about 40% of the deaths from Tuberculosis are reported weekly by the Local Boards of Health.

STATEMENT OF BIOLOGICAL PRODUCTS.

498 Municipalities.

October 1st, 1916—September 30th, 1917.

	Smallpox vaccine	Diphtheria Antitoxin units	Diphtheria Antitoxin syringes	Anti-meningitis serum	Intra-spinal outfits	Tetanus Antitoxin units	Tetanus Antitoxin syringes	Pasteur Prev. Trt. Rabies	Civic Typhoid and Paratyphoid vaccine S.	Civic Typhoid and Paratyphoid vaccine D.	Military Typhoid and Paratyphoid vaccine S.	Military Typhoid and Paratyphoid vaccine D.
October	1,280	10,288,000	914	15	5	198,000	29	1	476	238	8,450	5,550
November	1,445	27,997,000	1,770	77	12	195,000	39	.....	658	329	13,150	11,050
December	790	20,382,000	1,227	146	1	54,000	6	3	262	129	5,950	12,350
January	1,320	19,781,000	1,410	46	10	78,000	13	10	248	124	18,115	11,905
February	1,070	8,207,000	758	77	23	43,500	17	4	328	183	13,800	12,510
March	1,605	18,403,000	958	90	15	94,500	16	2	1,228	614	23,700	13,350
April	1,710	10,981,000	567	134	14	208,500	54	5	1,838	919	8,525	5,525
May	2,205	10,092,000	555	61	23	124,500	15	9	1,163	634	8,100	7,050
June	2,665	11,164,000	787	83	17	84,000	19	5	360	450	19,400	21,150
July	1,840	12,806,000	1,027	31	20	188,000	32	1	530	595	23,460	15,575
August	4,610	6,148,000	436	39	.....	175,000	30	9	14,000	14,600	22,610	9,360
September	3,060	21,370,000	940	69	9	171,000	15	6	1,407	693	11,610	21,360
	23,600	177,619,000	11,349	868	149	1,614,500	285	55	22,498	19,508	176,870	146,735

Pertussis vaccine—138 boxes, 9 x 25cc. ; 4 x 20cc. ; 9 x 12cc. ; 47 x 10cc.
Ophthalmia (Silver Nitrate)—112 boxes.

S—Single dose.
D—Double dose.

SUPPLEMENTARY STATEMENT.

October 1st, 1916—September 30th, 1917.

	Cost of Products	Revenue			
		Diphtheria syringes	Intra-spinal outfits	Tetanus antitoxin syringes	Total
October	$1,874 65	$182 80	2 25	5 80	190 85
November	4,760 05	354 00	5 40	7 80	367 20
December	3,543 15	245 40	45	1 20	247 05
January	3,528 45	282 00	4 50	2 60	289 10
February	1,589 25	151 60	10 35	3 40	165 35
March	3,174 55	191 60	6 75	3 20	201 55
April	2,117 60	113 40	6 30	10 80	130 50
May	1,959 70	111 00	10 35	3 00	124 35
June	2,133 25	157 40	7 65	3 80	168 85
July	2,317 30	205 40	9 00	6 65	221 05
August	1,426 45	87 20	.....	6 00	93 20
September	3,733 25	188 00	4 05	3 00	195 05
	$32,157 65	$2,269 80	$67 05	$57 25	$2,394 10

Gross expense	$32,157 65
Revenue	2,394 10
Net expense	$29,763 55

DISTRIBUTION OF BIOLOGICAL PRODUCTS.
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Algoma—											
Bruce Mines	250										
Blind River	60										
Creighton Mine	50	144,000	5	5	1			8–4		6 x 10 cc. 6 x 12 "	
Espanola		65,000	8								
Foleyet										1 box	1 box
Franz	50	150,000				7,500		20–10			
Hearst		202,000	21								
Helen Mine		170,000	40								
Hornepayne	35	51,000		4		7,500		26–13		1	1
Jacksonboro'	15	150,000						48–24			
John Island		35,000						4–2			
McDonald & F		66,000									
Spragge		70,000									
St. Joseph		144,000	30								
Steelton		585,000	102								
Sault Ste. Marie	90	680,000	115	7						2	2
Thessalon	215	336,000		6				24–12			
Totals	765	2,848,000	321	22	1	15,000		130–65		4 boxes 6 x 10 cc. 6 x 12 cc.	4
Brant—											
Brantford	130	585,000				19,000		112–56	1		
Burford Tp								12–6			
Oakland		16,000									
Paris	60	96,000	22			4,500	3	25–25			
Totals	190	681,000	22			24,000	3	149–87	1		
Bruce—											
Albermarle		30,000									
Brant		80,000									
Carrick		182,000			6	6,000	4				
Chesley	15	198,000								3 boxes 2 x 10 cc.	
Elmwood						8,000	3	6–3			

Formosa		56,000									
Greenoch		20,000									
Huron	20	105,000		5		7,500					
Lucknow	5	36,000				15,000					
Port Elgin	75	42,000									
Tara		48,000	12		3	1,500	1				
Teeswater	5	37,000	19								
Tiverton		3,000	2								
Walkerton		96,000									
Totals	120	933,000	33	5	9	38,000	8	6-3		3 boxes 2 x 10 cc.	
Carleton—											
Eastview		200,000	30								
Gower N.		96,000		6							
Huntley		285,000	10	2	1						
Kars		30,000									
Manotick		45,000									
Nepean		374,000	50								
Osgoode		48,000		6							
Ottawa	305	12,654,000	576	16	14	18,000	6	56-23		12 boxes	116 boxes
Richmond		33,000						2-1			
Totals	305	13,765,000	666	30	15	18,000	6	58-24		12	116
Dufferin—											
Mono		48,000	12								
Melancthou		20,000	2								
Shelburne	20	75,000						20-10			
Totals	20	143,000	14					20-10			
Essex—											
Amherstburg	385							212-106			
Belle River	25	60,000	4								
Colchester S.	30	50,000	24								
Essex	180	526,000	94						1		
Fort City		414,000	102			9,000	6				
Gosfield S	40	80,000									
Kingsville	30	117,000									
Leamington		78,000	42					24-12			
Malden		65,000	18								
Mersea	20	220,000						4-2			
Pelee Island	10	26,000						12-6		4	4
Rochester	300	170,000						60-30			

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Vaccine Paratyphoid S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Essex—Continued											
Sandwich E.	.....	377,000	45	.....	.....	.....	.....	.....	.....	.....	.....
" W.	.....	340,000	80	.....	.....	.....	.....	.....	.....	.....	.....
Sandwich	.....	530,000	65	7	1	4,500	.....	20–10	.....	.....	.....
Walkerville	60	1,908,000	366	.....	.....	.....	.....	.....	.....	.....	.....
Windsor	915	5,735,000	944	.....	16	22,500	15	10–5	.....	6	3
Totals	1,995	10,696,000	1,784	7	17	36,000	21	342–171	1	10	7
Elgin—											
Aylmer	.....	18,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bayham	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 box
Malahide	.....	15,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rodney	10	10,000	5	.....	.....	.....	.....	.....	.....	.....	.....
Southwold	.....	130,000	35	.....	.....	7,500	5	.....	.....	.....	.....
Springfield	.....	180,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	55	1,935,000	.....	5	.....	7,500	.....	.....	.....	.....	.....
West Lorne	5	26,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	85	2,314,000	40	5	.....	15,000	5	.....	.....	.....	1 box
Frontenac—											
Clarendon & M.	10	34,000	.....	.....	.....	.....	.....	8–4	.....	.....	.....
Kingston City	110	1,025,000	.....	17	2	18,000	.....	.....	.....	6 x 10 cc. 6 x 25 cc.	.....
Oso Tp.	15	84,000	.....	1	.....	.....	.....	12–6	.....	.....	.....
Portsmouth	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Storrington	10	6,000	.....	2	.....	.....	.....	6–3	.....	.....	.....
Totals	145	1,149,000	.....	20	4	18,000	.....	26–13	.....	6 x 10 cc. 6 x 25 cc.	.....
Grey—											
Bentinck	.....	42,000	18	.....	.....	.....	.....	.....	.....	.....	.....
Chatsworth	.....	50,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collingwood Tp.	10	16,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dundalk	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Egremont	.....	101,000	14	.....	.....	.....	.....	.....	.....	.....	.....

Euphrasia	10	42,000						24-12			
Flesherton		39,000									
Glenelg		53,000	3		3	9,000					
Hanover		8,000									
Holland		40,000	8								
Keppel	10	30,000						12-6		2 boxes	
Meaford	30	234,000									
Normanby		170,000	30								
Owen Sound		281,000	125					56-28			1 box
Sullivan	5	6,000	3								
Sydenham		42,000									
Totals	80	1,154,000	201		3	9,000		92-46		2	1
Halton—											
Acton	90	52,000									
Burlington		125,000	20						3		
Esquesing	10										
Georgetown		48,000									
Milton		108,000									
Oakville	10	66,000	12	5				4-2	2		1
Totals	110	399,000	32	5				4-2	5		1
Haliburton—											
Dysart & D		84,000								2	2
Glamorgan	15										
Totals	15	84,000								2	2
Haldimand—											
Canborough		62,000						20-10			
Cayuga N		21,000	6					50-25			
" S								8-5			
Canfield									2		
Dunnville		10,000				6,000		6-3			
Hagersville	80							2-1			
Rainham		25,000						11-10			
Seneca		15,000									
Totals	80	133,000	6			6,000		87-54	2		
Hastings—											
Bangor & W	25	120,000				4,500		12-6			
Belleville		264,000			4						

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*

October 1st, 1916—September 30th, 1917.

——	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Hastings—Con.											
Carlow	25										
Deseronto	15	12,000									
Huntingdon		15,000									
Madoc	180										
Marmora		60,000	8								
Monteagle & H.	15	96,000						12–6			
Rawdon		46,000									
Roslin		100,000						10–5			
Sidney				3	2						
Stirling		78,000									
Trenton	10	125,000		6		22,500		550–275			
Tweed	10							6–3			
Totals	280	916,000	8	9	6	27,000		590–295			
Huron—											
Ashfield	25										
Belgrave											1
Brussels		95,000									
Goderich		25,000									
Grey	10	34,000									
Hay		20,000									
Kirkton										{ 3 boxes 5 x 10 cc. }	
McKillop						3,000					
Seaforth		13,000	4								
Stanley				2		4,500	3				2
Wingham		718,000				3,000					
Totals	35	905,000	4	2		10,500	3			3 boxes 5 x 10 cc.	3
Kenora—											
Kenora	125	101,000				6,000		80–40			
Keewatin				6							
Totals	125	101,000		6		6,000		80–40			

Lambton—											
Alvinston	5	39,000				3,000		12–6			
Arkona		103,000									
Bosanquet		30,000									
Brooke	25	17,000		2		6,000				1 box	
Euphemia		60,000	20								
Forest	10	162,000	66							4 boxes	
Petrolea	65	115,000	20					50–34			
Plympton	10	153,000	5								1 box
Sarnia		170,000	70					24–12			
Thedford	5	30,000								1 box	
Totals	120	879,000	781	2		9,000		86–52		6 boxes	1 box
Leeds & Grenville—											
Brockville	40	254,000	76	18		9,000		16–8			
Cardinal						9,000					1
Crosby S		30,000									
Elizabethtown		14,000	12	6		6,000					
Front of Leeds & L		9,000				4,500					
Front of Escott										2 boxes	2
Front of Yonge	25	170,000	40		10	19,500	13	16–8			
Gananoque	70	192,000	25								
Kemptville						3,000	2				
Merrickville	20										
Newboro		55,000						8–4			
Prescott										{ 2 boxes 2 x 10 cc. }	1
Totals	155	724,000	153	24	10	51,000	15	40–20		4 boxes 2 x 10 cc.	4
Kent—											
Blenheim		179,000									
Chatham	165	1,174,000	126			54,000	18	72–36			
Dresden		355,000	12					4–2			
Dover		186,000	42								
Highgate		36,000									
Orford		24,000	4			7,500					
Raleigh								6–3			
Ridgetown		75,000									
Thamesville		83,000	10			15,000	10				
Tilbury	100	258,000	54			3,000		12–6		{ 1 x 10 cc. 2 boxes }	

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A.M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Kent—Continued											
Tilbury E.	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wallaceburg	.....	351,000	.....	.....	.....	4,500	.....	.....	.....	.....	.....
Totals	345	2,721,000	248	.....	.....	84,000	28	100–47	.....	1 x 10 cc. 2 boxes	.....
Lanark—											
Almonte	40	210,000	.....	.....	.....	30,000	.....	60–60	.....	.....	.....
Dalhousie	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drummond	25	16,000	6	.....	.....	6,000	4	12–6	.....	.....	.....
Lanark	10	84,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montague	.....	36,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pakenham	.....	18,000	4	.....	.....	.....	.....	.....	.....	.....	.....
Perth	35	82,000	.....	3	.....	13,500	.....	.....	.....	.....	.....
Pickering	.....	76,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sherbrooke S.	.....	24,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith's Falls	125	246,000	.....	6	.....	7,500	.....	2,850–1,775	.....	.....	.....
Totals	240	792,000	10	9	.....	57,000	4	2,966–1,863	.....	.....	.....
Lennox & Ad.—											
Camden E.	10	21,000	.....	.....	.....	.....	.....	8–4	.....	.....	.....
Ernestown	.....	31,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Napanee	.....	95,000	20	.....	.....	.....	.....	6–6	.....	.....	.....
Sheffield	.....	30,000	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Totals	10	177,000	20	.....	.....	.....	.....	26–16	.....	.....	.....
Lincoln—											
Beamsville	50	90,000	20	.....	.....	.....	.....	.....	.....	.....	.....
Clinton	.....	30,000	.....	.....	.....	.....	.....	18–9	.....	.....	.....
Gainsborough	25	185,000	1	.....	.....	.....	.....	.....	.....	.....	.....
Grimsby	.....	135,000	10	.....	1	1,500	1	.....	.....	.....	.....
Louth	.....	34,000	.....	.....	.....	.....	.....	50–25	.....	.....	.....
Niagara Tp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 box
Niagara Tn.	60	13,000	5	.....	3	3,000	2	.....	.....	.....	.....
St. Catharines	130	1,309,000	20	10	.....	57,000	.....	221–153	1	1	.....
Totals	265	1,796,000	56	10	4	61,500	3	289–187	1	1	1

Manitoulin—											
Assiginack		21,000									
Gore Bay		54,000	15								
Little Current		62,000									
Totals		137,000	15								
Middlesex—											
Caradoc	45										
Delaware		110,000	20								
Ekfrid		50,000	8								
Glencoe		78,000						12–6			
London	450	7,280,000	905	18		15,000		196–98		20 doses 1 box	
Lucan		120,000									
McGillivray								2–1			
Metcalfe								12–6			
Mt. Brydges	160	20,000									
Parkhill		48,000	18								
Strathroy		36,000									
Westminster		385,000	85								
Totals	655	8,127,000	1,036	18		15,000		222–111		20 doses 1 box	
Muskoka—											
Bala		20,000						24–12			
Bracebridge		58,000									
Gravenhurst	60	200,000						32–18		6 x 10cc. 6 boxes	
Muskoka San		26,000								2 x 10 cc. 2 boxes	
Huntsville		53,000									
Medora & W		100,000									
Morrison		146,000	20								
Muskoka		48,000									
Oakley	5	20,000									
Port Carling		25,000				3,000					
Totals	65	696,000	20			3,000		56–30		9 boxes 8 x 10cc.	
Nipissing—											
Bonfield Tp		174,000									
Cache Bay		31,000									
Caldwell	25									1	1
Capreol		146,000									

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Nipissing—Con.											
Chisholm	150	80,000	.....	5	.....	7,500	.....	48–24	.....	.....	.....
North Bay	.....	719,000	90	5	.....	7,500	.....	.....	.....	.....	.....
Smooth Rock Falls	.....	131,000	.....	.....	.....	.....	.....	400–200	.....	.....	.....
Sturgeon Falls	25	100,000	.....	.....	.....	.....	.....	.....	.....	.....	6
Swastika	.....	175,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	200	1,156,000	90	10	.....	15,000	.....	448–224	.....	1	7
Norfolk—											
Delhi	20	30,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Dover	.....	35,000	.....	.....	.....	.....	.....	12–6	.....	20 x 25 cc.	.....
Port Rowan	30	408,000	60	.....	2	27,000	18	.....	.....	.....	.....
Simcoe	55	108,000	.....	3	.....	.....	.....	42–21	1	.....	.....
Walsingham N.	5	18,000	4	.....	.....	.....	.....	42–21	.....	.....	.....
Totals	110	599,000	64	3	2	27,000	18	96–48	1	20 x 25 cc.	.....
Northumberland and Durham—											
Bowmanville	10	301,000	.....	2	.....	3,000	.....	24–12	1	1 box	.....
" Hosp.	.....	21,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brighton Vg.	25	.....	.....	.....	.....	.....	.....	12–6	.....	{ 2 boxes 2 x 10 cc. }	.....
Cavan	.....	.....	.....	.....	.....	.....	.....	50–25	.....	.....	.....
Clarke	30	55,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haldimand	.....	40,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hamilton	.....	80,000	25	.....	.....	.....	.....	.....	.....	.....	.....
Hastings	.....	10,000	5	.....	.....	.....	.....	.....	.....	.....	.....
Hope	.....	42,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Millbrook	.....	65,000	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Newcastle	.....	15,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Percy	.....	.....	.....	.....	.....	.....	.....	6–3	.....	.....	.....
Port Hope	.....	830,000	22	4	.....	7,500	.....	24–12	1	{ 3 boxes 3 x 10 cc. }	11 boxes
" " Hosp.	.....	290,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wooler	.....	.....	.....	.....	.....	.....	.....	6–3	.....	.....	.....
Totals	65	1,749,000	52	6	.....	10,500	.....	124–67	2	5 boxes. 5 x 10 cc.	11

Oxford—											
Blenheim	15	116,000									
Ingersoll		235,000		8	1						
Nissouri E.		96,000									
Norwich N.						3,000					
" S.	10	18,000						12-6			
" Town		115,000									1 box
Otterville	25										
Oxford, N.		48,000									
" E.	20										
Thamesford								2-1			
Tillsonburg	150	100,000									
Woodstock		224,000						42-21			
Totals	220	952,000		8	1	3,000		56-28			1
Ontario—											
Beaverton								12-6			
Brock		40,000								2 x 10 cc. 2 boxes	
Cannington	10	49,000						18-9			
Oshawa	110	298,000						16-8			
Reach	5							6-3			
Uxbridge	25	112,000		5		9,000		16-8			
Whitby E.								50-25			
Totals	150	499,000		5		9,000		118-59		2 x 10 cc. 2 boxes	
Parry Sound—											
Ardbeg	10	40,000									
Burk's Falls		90,000						24-12			
Himsworth	10	126,000						6-3			
Humphrey		37,000									
Kearney	5	370,000						120-60			
McMurrich								6-3			
Machar								6-3			
Noble		21,000									
Parry Sound		207,000				15,000					
Perry		70,000	30					2-1			
Strong and J.								30-15			1 box
Totals	25	961,000	30			15,000		194-97			1 box

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*

October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20 cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Peel—											
Bolton		100,000									
Brampton		250,000	17								
Caledon E.	15							12–6			
Cooksville									2		
Palgrave		19,000									
Port Credit	10										
Streetsville		32,000								7 boxes	
Totals	25	401,000	17					12–6	2	7	
Perth—											
Blanchard		24,000									
Dublin								17–10			
'Elma	15	75,000						8–4			
Fullarton	5	7,000									
Hibbert		36,000									
Listowel	20	31,000						16–8		1 box	1 box
Logan	10	92,000									
Milverton				4				24–12			
Mitchell	5	180,000									
St. Mary's		36,000									
Stratford	85	246,000				1,500		18–9			
Totals	140	727,000		4		1,500		83–43		1 box	1 box
Peterboro—											
Belmont		14,000	8								
Ennismore		80,000	10		3						
Havelock	10	44,000									
Norwood		95,000									
Otonabee		20,000	2			15,000	10				
Peterboro	105			12				120–60	2		
Totals	115	253,000	20	12	3	15,000	10	120–60	2		

Prescott & Russell											
Alfred	.....	96,000	36	.....	.....	.....	.....	.....	.....	.....	.....
Caledonia	.....	80,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cambridge	45	216,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Casselman	.....	48,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarence	.....	1,066,000	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Cumberland	.....	120,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hawkesbury E.	10	120,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
" W.	220	175,000	25	5	.....	7,500	.....	.....	.....	.....	.....
" Town	1,515	160,000	.....	.....	.....	.....	.....	.....	.....	.....	1
L'Orignal	.....	216,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Navan	.....	33,000	10	.....	.....	.....	.....	.....	.....	.....	.....
Plantaganet N.	25	294,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
" S.	120	415,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland	.....	510,000	.....	.....	.....	60,000	.....	.....	.....	.....	.....
Russell	100	120,000	10	.....	5	7,500	5	.....	.....	.....	.....
Vankleek Hill	10	125,000	.....	2	.....	3,000	.....	.....	.....	.....	.....
Totals	2,045	3,794,000	81	7	5	78,000	5	12–6	.....	.....	1 box
Prince Edward—											
Bloomfield	.....	25,000	5	.....	.....	.....	.....	11–10	.....	.....	.....
Hillier	.....	70,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marysburgh N.	.....	6,000	.....	2	.....	4,500	.....	.....	.....	.....	.....
" S.	.....	27,000	6	.....	.....	6,000	4	4–2	.....	.....	.....
Picton	50	.....	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Sophiasburg	50	18,000	5	.....	.....	.....	.....	.....	.....	.....	.....
Totals	100	146,000	16	2	.....	10,500	4	27–18	.....	.....	.....
Rainy River—											
Chapple	.....	70,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Emo	.....	190,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Frances	350	54,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
McIrvine	.....	.....	.....	.....	.....	4,500	.....	.....	.....	2	2
Rainy River	150	186,000	.....	.....	.....	.....	.....	100–50	.....	.....	.....
Totals	500	500,000	.....	.....	.....	4,500	.....	100–50	.....	2	2
Renfrew—											
Admaston	.....	95,000	25	.....	.....	.....	.....	.....	.....	.....	.....
Bagot & B.	.....	257,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bromley	.....	128,000	5	.....	.....	.....	.....	.....	.....	.....	.....
Cobden	.....	138,000	36	.....	.....	.....	.....	6–3	.....	.....	.....
Eganville	.....	120,000	20	.....	.....	.....	.....	.....	.....	.....	.....

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Renfrew—Con.											
Horton	.....	168,000	25	.....	.....	.....	.....	.....	.....	.....	.....
Pembroke	15	161,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Radcliffe	.....	21,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raglan	.....	96,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Renfrew	15	530,000	110	.....	4	.....	.....	.....	.....	.....	.....
Sebastopol	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Sherwood	.....	180,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stafford	.....	91,000	.....	.....	.....	.....	.....	24–12	.....	.....	.....
Wilberforce	.....	288,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	30	2,273,000	221	.....	4	.....	.....	30–15	.....	.....	2
Simcoe—											
Alliston	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barrie	240	480,000	.....	.....	.....	18,000	.....	100–50	.....	2 boxes	50 doses
Coldwater	.....	320,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collingwood	25	86,000	11	8	7	.....	.....	24–12	.....	3 boxes	3 boxes
Cookstown	.....	50,000	.....	.....	.....	.....	.....	48–24	.....	.....	.....
Craighurst	.....	.....	.....	.....	.....	.....	.....	2–1	.....	.....	.....
Creemore	.....	26,000	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Flos	15	42,000	.....	6	.....	18,000	.....	12–6	.....	.....	.....
Hillsdale	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midland	65	142,000	24	.....	.....	7,500	1	.....	.....	.....	.....
Orillia	.....	804,000	180	6	.....	.....	.....	150–75	1	.....	.....
" Hospital	.....	78,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penetang	.....	156,000	.....	.....	.....	.....	.....	.....	.....	1 box	.....
Stayner	15	77,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sunnidale	25	.....	.....	.....	.....	9,000	.....	.....	.....	.....	.....
Tay	.....	.....	.....	6	1	.....	.....	.....	.....	.....	.....
Victoria Harbor	.....	144,000	30	.....	.....	.....	.....	.....	.....	.....	.....
Waubaushene	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	715	2,405,000	245	26	8	52,500	1	348–174	1	6 boxes	3 boxes 50 doses
S.D. & Glengarry—											
Alexandria	10	173,000	.....	.....	.....	.....	.....	20–10	.....	.....	.....
Charlottenburg	20	40,000	.....	.....	.....	.....	.....	.....	.....	.....	.....

Cornwall Tp.	.....	110,000	20	.....	.....	.....	.....	.....	.....	.....	3 boxes
" Town.	30	618,000	24	2	1	.....	.....	.....	.....	.....	.....
Finch Vg.	.....	80,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Tp.	.....	45,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kenyon	.....	30,000	15	.....	.....	.....	.....	.....	.....	.....	.....
Lancaster	.....	104,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lochiel	.....	30,000	10	.....	.....	.....	.....	.....	.....	.....	.....
Maxville	20	105,000	30	.....	.....	.....	.....	50–25	.....	.....	.....
Morrisburg	10	35,000	10	.....	.....	.....	.....	.....	.....	1	.....
Osnabruck	.....	50,000	4	.....	.....	3,000	2	.....	.....	.....	.....
Winchester	.....	52,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	90	1,472,000	113	2	1	3,000	2	70–35	.....	1	3
Sudbury—											
Chelmsford	15	102,000	.....	.....	.....	.....	.....	24–12	.....	.....	.....
Coniston	.....	70,000	20	.....	.....	.....	.....	.....	.....	.....	.....
Copper Cliff	460	95,000	25	4	.....	.....	.....	2–1	.....	4 boxes	.....
Massey	25	60,000	20	.....	.....	.....	.....	.....	.....	.....	1 box
McKim	200	300,000	.....	5	.....	.....	.....	.....	.....	.....	.....
Sudbury	2,800	681,000	.....	14	4	.....	.....	2–1	.....	.....	.....
Warren	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	3,575	1,308,000	65	23	4	.....	.....	28–14	.....	4	1
Temiskaming—											
Cobalt	115	312,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cochrane	50	420,000	.....	12	6	6,000	.....	666–3	.....	.....	.....
Haileybury	.....	122,000	32	.....	.....	.....	.....	6–3	.....	.....	.....
Hilliard	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iroquois Falls	.....	240,000	.....	.....	.....	.....	.....	2000–1000	.....	2	.....
James	25	48,000	2	6	1	10,500	1	.....	.....	.....	.....
Kerns	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Matheson	.....	44,000	.....	.....	.....	.....	.....	10–5	.....	.....	.....
New Liskeard	5	.....	.....	8	.....	.....	.....	8–4	.....	{ 3 boxes 0x10cc }	.....
Tisdale	50	25,000	.....	.....	1	1,500	1	100–50	.....	.....	.....
Totals	270	1,211,000	34	26	9	18,000	2	2790–1065	.....	5 boxes 10x10cc	.....
Thunder Bay—											
Fort William	305	1,554,000	234	.....	.....	36,000	.....	.....	.....	1 box	1
Nipigon	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Port Arthur	25	408,000	.....	.....	.....	.....	.....	60–30	.....	.....	.....
Schreiber	.....	140,000	.....	.....	.....	.....	.....	30–15	.....	.....	.....
Totals	330	2,102,000	234	.....	.....	36,000	.....	90–45	.....	2	2

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

—	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
Victoria—											
Bexley	.....	242,000	53	.....	.....	.....	.....	.....	.....	.....	.....
Bobcaygeon	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eldon	.....	164,000	40	.....	.....	.....	.....	.....	.....	.....	.....
Emily	.....	132,000	24	.....	.....	.....	.....	.....	.....	.....	.....
Kinmount	.....	.....	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Lindsay	.....	40,000	15	.....	.....	.....	.....	.....	.....	.....	.....
Mariposa	.....	45,000	.....	.....	.....	.....	.....	20–10	.....	.....	.....
Somerville	.....	5,000	3	.....	.....	.....	.....	.....	.....	6 boxes 2 x 10cc	.....
Woodville	.....	25,000	9	.....	.....	.....	.....	.....	.....	5 boxes 4 x 10cc	.....
Totals	5	653,000	144	.....	.....	.....	.....	32–16	.....	11 boxes 6 x 10cc	.....
Waterloo—											
Ayr	10	60,000	.....	.....	.....	.....	.....	24–12	.....	.....	.....
Galt	150	255,000	.....	.....	.....	.....	.....	.....	.....	2 boxes 2 x 10cc	.....
Hespeler	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kitchener	45	1,010,000	332	4	9	6,000	4	.....	.....	.....	.....
New Hamburg	.....	246,000	.....	.....	.....	.....	.....	12–6	.....	.....	.....
Preston	.....	26,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterloo	.....	216,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wellesley	.....	110,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmot	.....	56,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	230	1,979,000	332	4	9	6,000	4	36–18	.....	2 boxes 2 x 10cc	.....
Welland—											
Bertie	.....	48,000	12	.....	.....	.....	.....	.....	.....	.....	.....
Bridgeburg	.....	37,000	5	.....	.....	.....	.....	.....	.....	1 box	.....
Fort Erie	.....	42,000	10	.....	.....	.....	.....	.....	.....	.....	.....
Niagara Falls	50	180,000	20	.....	.....	.....	.....	9–6	.....	.....	.....
Pelham	5	29,000	13	.....	4	4,500	3	12–6	.....	.....	.....
Port Colborne	.....	150,000	20	6	.....	.....	.....	144–72	1	.....	.....

Ridgeway								4-2			
Thorold		70,000									
Wainfleet		20,000								1 box	3
Welland	80	546,000		4		19,500		663-334	1		
Willoughby		20,000						20-10			
Totals	135	11,421,000	80	10	4	24,000	3	852-430	2	2 boxes	3
Wellington—											
Clifford	20										
Drayton	60	277,000				3,000		38-20			
Elora	5	166,000	2								
Eramosa		54,000	6								
Erin and G	25	24,000				3,000	2	12-6			
Fergus	30	180,000				4,500		10-5			
Guelph	830	1,876,000				34,500				10 x 10cc 10 x 25cc	
Homewood San								6-3			
Ontario Refor'try		105,000	30			15,000					
Mount Forest	5	20,000		2		3,000					
Nichol		150,000									
Palmerston	150	157,000						10-5			
Peel								6-3			
Pilkington		134,000									
Totals	1,125	3,143,000	38	2		63,000	2	82-42		10 x 10cc 10 x 25cc	
Wentworth—											
Ancaster						7,500	5				
Barton		90,000									
Beverley		180,000	24					6-3			
Binbrook						18,000					
Dundas	10	232,000						6-3			
Flamboro W										12 boxes	
Hamilton	204	2,130,000	12	54	3	262,500	3	104-52	3	15 boxes 3 x 10cc 1 x 25cc	5
Saltfleet	20	36,000									
Totals	234	2,668,000	36	54	3	288,000	8	116-58	3	27 boxes 3 x 10cc 1 x 25cc	5
York—											
Aurora	115	94,000									
Etobicoke	60	68,000	20								

DISTRIBUTION OF BIOLOGICAL PRODUCTS.—*Continued.*
October 1st, 1916—September 30th, 1917.

——	Smallpox Vaccine	Diphtheria Antitoxin Units	Diphtheria Antitoxin Syringes	Anti-meningitis Serum at 20cc.	A. M. Outfits	Tetanus Antitoxin Units	Tetanus Antitoxin Syringes	Typhoid and Paratyphoid Vaccine S. D.	Pasteur Treatments	Pertussis Vaccine	Ophthalmia Silver Nitrate
York—Con.											
Gwillimbury, N.	.....	66,000	.....	.....	.....	.....	.....	.....	.....	6 boxes	.....
" E.	15	96,000	36	.....	6	.....	.....	.....	.....	.....	.....
Islington	.....	.....	.....	.....	.....	.....	.....	.....	1	2 boxes	.....
King	.....	24,000	.....	.....	.....	.....	.....	20–10	.....	.....	.....
Mimico	435	449,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hosp. for Insane	.....	.....	.....	.....	.....	6,000	.....	.....	.....	.....	.....
Newmarket	10	96,000	.....	.....	4	.....	.....	486–243	.....	.....	.....
New Toronto	.....	39,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond Hill	.....	50,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarboro	15	54,000	.....	.....	.....	.....	.....	22–11	3	.....	.....
Schomberg	.....	99,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutton	5	79,000	.....	.....	.....	.....	.....	6–3	.....	7 boxes	.....
Swansea	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 boxes 3 x 10cc 2 x 12cc	1
Weston	50	42,000	.....	.....	.....	.....	.....	.....	.....	.....	1
Whitchurch	25	50,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Woodbridge	10	44,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
York	40	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Toronto Free Hospital Consump.	.....	350,000	.....	.....	.....	.....	.....	60–30	.....	.....	.....
Hosp. for Inc'b'es.	.....	.....	.....	.....	.....	.....	.....	50–50	.....	.....	.....
Western Hospital	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....
Dept. Hygiene	.....	.....	.....	.....	.....	.....	.....	–330	.....	.....	.....
Hosp. for Sick Children	.....	.....	.....	.....	.....	.....	.....	50–25	.....	.....	.....
General Hospital	.....	.....	.....	.....	.....	.....	.....	–625	.....	.....	.....
Hartz & Co.	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ingram & Bell	75	15,000	.....	5	.....	7,500	.....	.....	.....	.....	.....
Prov. Laboratory	.....	.....	.....	6	2	.....	.....	.....	.....	.....	.....
Totals	915	1,715,000	56	11	12	13,500	.....	769–1327	6	18 boxes 3 x 10cc 2 x 12cc	2
Toronto	6,355	83,675,000	4,141	461	.....	288,000	142	1123–1353	30	19 boxes 40cc 17 x 10cc 2 x 12cc 2 x 25cc	5 boxes

REPORT OF THE BUREAU OF CHILD WELFARE

From October, 1916, to December, 1917

The Chairman and Members of the Provincial Board of Health.

Gentlemen,—I have the honour to submit herewith a report upon the work of the Bureau since its establishment in the month of October, 1916, until December 31st, 1918.

That Ontario's death rate during the past ten years among infants has been comparatively high is shown by the accompanying charts. This loss of life is a matter of national importance in view of the large number of casualties in the Canadian Expeditionary Force, and it was felt that a campaign for conservation of child life was quite opportune.

Literature.

Ignorance is conceded by all authorities to play an important part in the problem of infant mortality, and as printed instruction is an essential feature of propaganda, the Board published "The Baby," a pamphlet upon infant and child care, in March of this year. We hope to publish bulletins on subjects relative to other phases of the question in the near future in order to meet the increasing demand for instructive literature.

Surveys.

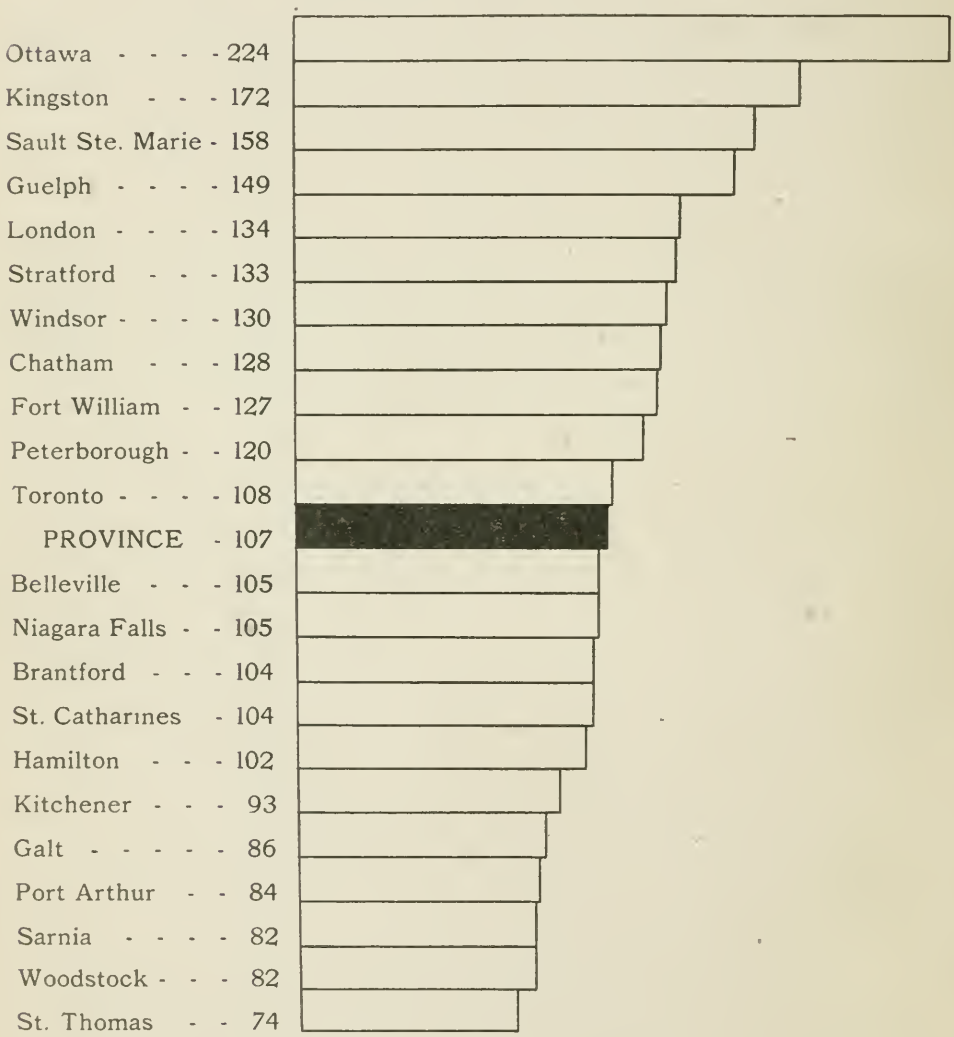
In March the Bureau was requested, by the Baby Welfare Association of Greater Hamilton, to undertake an Infant Mortality survey in that city, using the plan and methods of work of the United States Children's Bureau. In accordance with your instructions, a visit was made to Washington and every assistance possible was given by Miss Julia C. Lathrop, Chief of the Children's Bureau. We were very fortunate also in being able to accompany the agents in the city of Baltimore, where a survey was being completed. In consequence of the visit, the survey was undertaken in Hamilton, beginning June 3rd. This necessitated the special instruction of a corps of twenty-seven agents. The survey was completed on July 26th. The field work comprised the following up of 2,950 babies, and we may point with pleasure to the fact that out of this number of schedules handled, we met with but two refusals. The work of tabulation is now under way and the report will be issued in due course.

Conventions.

The Bureau sent a representative to the meeting of the Canadian Public Health Association, which was held in the city of Ottawa in the month of September, when a paper was read upon the work of the Hamilton survey. The Bureau was represented also at the annual meeting of the American Association for the Prevention of Infant Mortality, which was held in the month of October in Richmond, Va., and followed by the annual meeting of the American Public Health Association in Washington, D.C.

INFANT MORTALITY IN CITIES OF ONTARIO

(Registrar-General's Report, 1916)


Ottawa - - - - 224
Kingston - - - 172
Sault Ste. Marie - 158
Guelph - - - - 149
London - - - - 134
Stratford - - - 133
Windsor - - - - 130
Chatham - - - 128
Fort William - - 127
Peterborough - - 120
Toronto - - - - 108
PROVINCE - 107
Belleville - - - 105
Niagara Falls - - 105
Brantford - - - 104
St. Catharines - 104
Hamilton - - - 102
Kitchener - - - 93
Galt - - - - - 86
Port Arthur - - 84
Sarnia - - - - 82
Woodstock - - - 82
St. Thomas - - 74

Information of great value was obtained at these gatherings, and your representative derived inspiration for greater efforts in the interests of Child Welfare in Ontario, by reason of association with those engaged in the work throughout the United States and Canada.

Child Welfare Work.

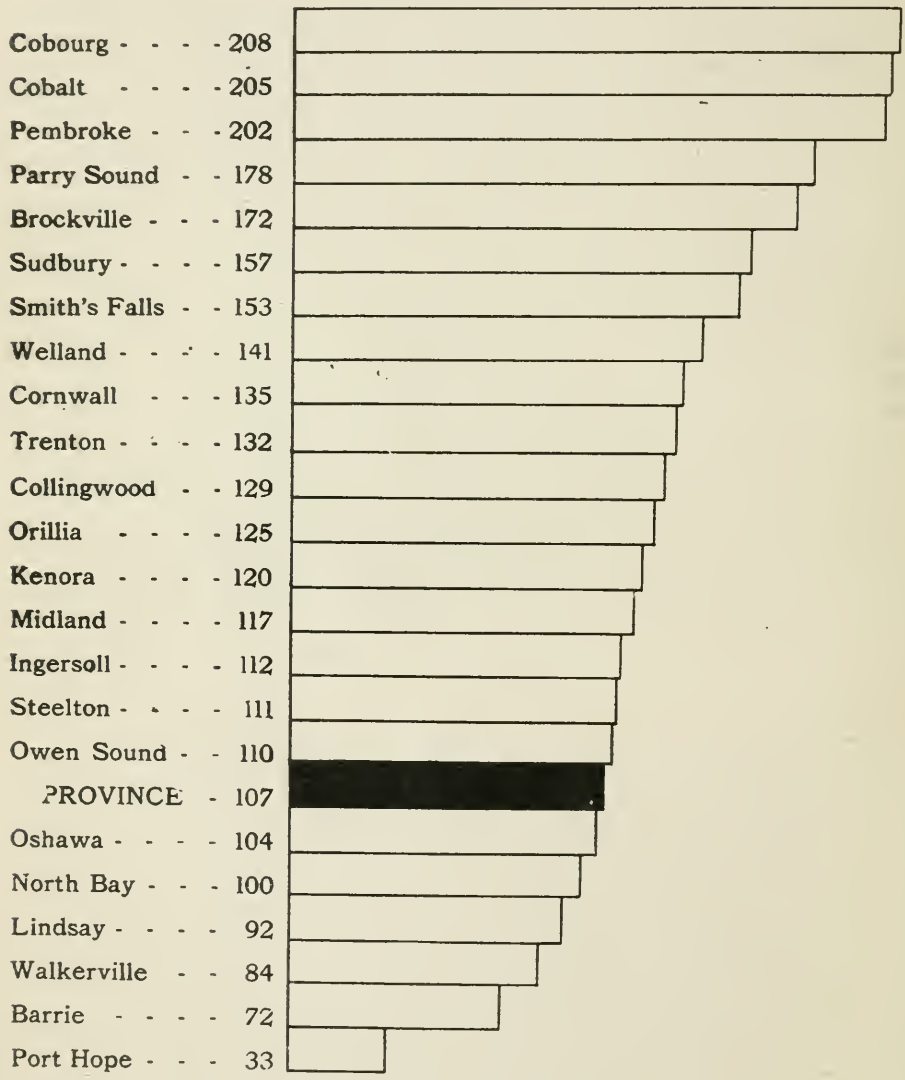
During the year, the Director has been enabled to personally see the work which is being carried on in the various cities of the Dominion, as well as some of the centres in the United States. In January, 1917, through the courtesy of the Medical Officer of Health of the city of *Toronto,* we were able to inspect the work which is being done by the Division of Child Hygiene of the Department of Public Health. In March, a visit was made to the city of *Hamilton,* where special attention was paid to the work of the Babies' Dispensary Guild. This is a private organization which has been doing excellent work for some years. When in *Baltimore,* advantage was taken of the opportunity to see the work which was being done by a local organization, "The Babies' Milk Fund." While in *Ottawa* for the meeting of the Canadian Public Health Association, a visit was made to the local Board of Health, which maintains baby clinics throughout the city. On this occasion the work of public and private agencies in the city of *Montreal* was also inspected, and a great deal of information obtained through the courtesy of the Medical Officer of Health. The work of the Diet Kitchen Association of *Washington,* D.C., was clearly outlined by the Superintendent, following the meeting in Richmond, Va., and upon the return trip, which was made by way of New York, the Division of Child Hygiene of the *New York City* Department of Health and the Baby Welfare Association made it possible for your representative to see the actual working out of the scheme for Child Welfare in that city. The assistance and information derived from these visits has been of inestimable value to the Bureau.

Exhibits.

During the year many new features have been added to the exhibit. A plaster cast of the Motherhood Group from the Victoria Memorial at Buckingham Palace, London, England, was made for the Bureau by Miss Merle Foster of the Ontario College of Art. Two mechanical models were designed in the office of the Bureau, the backgrounds of which were painted by Miss Mary Roberts, also a pupil of the Ontario College of Art. One model is illustrative of the Infant Mortality rate of the Province, while the other shows, in a graphic way, some features of the care that the baby has a right to expect. One set of posters (25) was obtained from the National Child Welfare Exhibition Company of New York City; one set (12) from the American Medical Association, and one set (10) was outlined in the office of the Bureau and painted in colors. An inexpensive layette, together with a cheap separate bed for the baby, was made for the Exhibit. A series of panels illustrative of the work that is being done in Canadian cities was begun, and we now have photographs from Toronto, Montreal, Ottawa, and Hamilton. A map of the Province was prepared showing, by means of various symbols, the centres in which the following agencies are present: Baby Welfare Work, Medical Inspection of Schools, and Public Hospitals.

INFANT MORTALITY IN TOWNS OF ONTARIO

(Registrar-General's Report, 1916)


Cobourg - - - - 208
Cobalt - - - - 205
Pembroke - - - 202
Parry Sound - - 178
Brockville - - - 172
Sudbury - - - - 157
Smith's Falls - - 153
Welland - - - - 141
Cornwall - - - 135
Trenton - - - - 132
Collingwood - - 129
Orillia - - - - 125
Kenora - - - - 120
Midland - - - - 117
Ingersoll - - - - 112
Steelton - - - - 111
Owen Sound - - 110
PROVINCE - 107
Oshawa - - - - 104
North Bay - - - 100
Lindsay - - - - 92
Walkerville - - 84
Barrie - - - - 72
Port Hope - - - 33

The Child Welfare Exhibit was shown in connection with the following events:—

(*a*) The Toronto Household Exhibition, which was held in the Arena Gardens during Easter week.

(*b*) Fourth Annual Baby Week, Hamilton, in June.

(*c*) The Canadian National Exhibition in August, when the first Baby Clinic under the auspices of the Provincial Board of Health was held. The Medical attendants for the Clinic were very kindly supplied by the Division of Child Hygiene of the Department of Public Health of Toronto. During the twelve days of the Exhibit advice was given to several hundred mothers and 150 babies were examined in the clinic. Two nurses were appointed to supervise the work of the clinic.

(*d*) The Central Canada Exhibition at Ottawa, in September.

In November the Bureau was fortunate in securing the services of Miss B. Knox, a graduate of the Toronto General Hospital, who was associated with us in the work of the Infant Mortality Survey in Hamilton, and later acted as nurse in charge of the clinic at the Canadian National Exhibition.

In the autumn a tour of the Exhibit was arranged in which cities in the western section of the Province were visited in the order given below. Hearty co-operation was extended us by the local health authorities, children's aid societies, and other agencies interested in child welfare. We endeavoured to hold clinics in each centre where the members of the medical profession were willing to undertake the work.

City	Infant Mortality Rate, 1916	% deaths under 1 year of total deaths	Birth Rate	School Inspection by Nurse only	Victorian Order of Nurses
1. Brantford.....	104	19.3	26.5	Yes	Yes
2. Woodstock.....	82	12.8	21.6	Yes	Yes
3. Sarnia.....	82	15.6	23.7	Yes	No
4. Stratford.....	133	24.0	22.3	Yes	Yes
5. Kitchener.....	93	23.3	29.6	Yes	Yes
6. Galt.....	86	16.7	23.4	Yes	No
7. Guelph.....	149	22.1	22.5	Yes	No

We are of the opinion that the following points are worthy of note:—

(1) No systematic Baby Welfare work is being done in any of the centres visited.

(2) No special provision is made for hospital accommodation for sick babies and children; none of the hospitals visited include a children's ward.

(3) Of the hospitals receiving public grants none had established Out-Patient Departments.

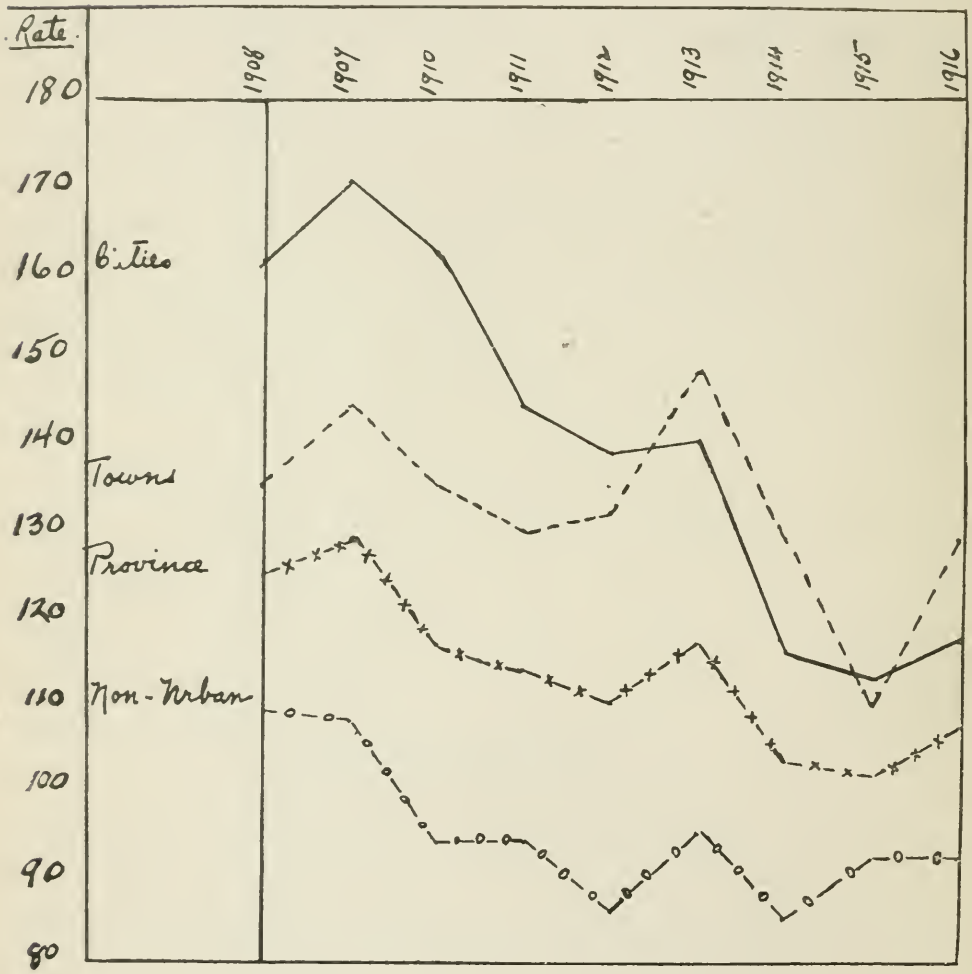
Summary.

Our endeavors this year have been directed towards stimulating local efforts, and it is our hope that the number of municipalities providing systematic care for well babies will greatly increase during 1918. Toronto, Hamilton, Ottawa, and Fort William (summer only) are the sole representatives in this field of social endeavor at the present writing.

INFANT MORTALITY RATES (1908-1916).

PROVINCE OF ONTARIO BY CLASS OF MUNICIPALITY.

(Figures supplied by Dept. of Registrar General, Ontario.)



NOTE.—Towns included are those having population of 5,000 and over. Non-Urban districts include all municipalities except cities and towns having population of 5,000 or over.

We should also be very glad to see any action tending to increase the accommodation for sick infants and children in hospitals receiving public aid.

The public health nurse has proven one of the baby's best friends, and it is our conviction that a great deal of valuable assistance can be rendered to the mothers of a municipality and a large number of babies saved yearly by the organization of public health nursing service in the cities, towns, and rural districts of the Province.

I have the honour to be,

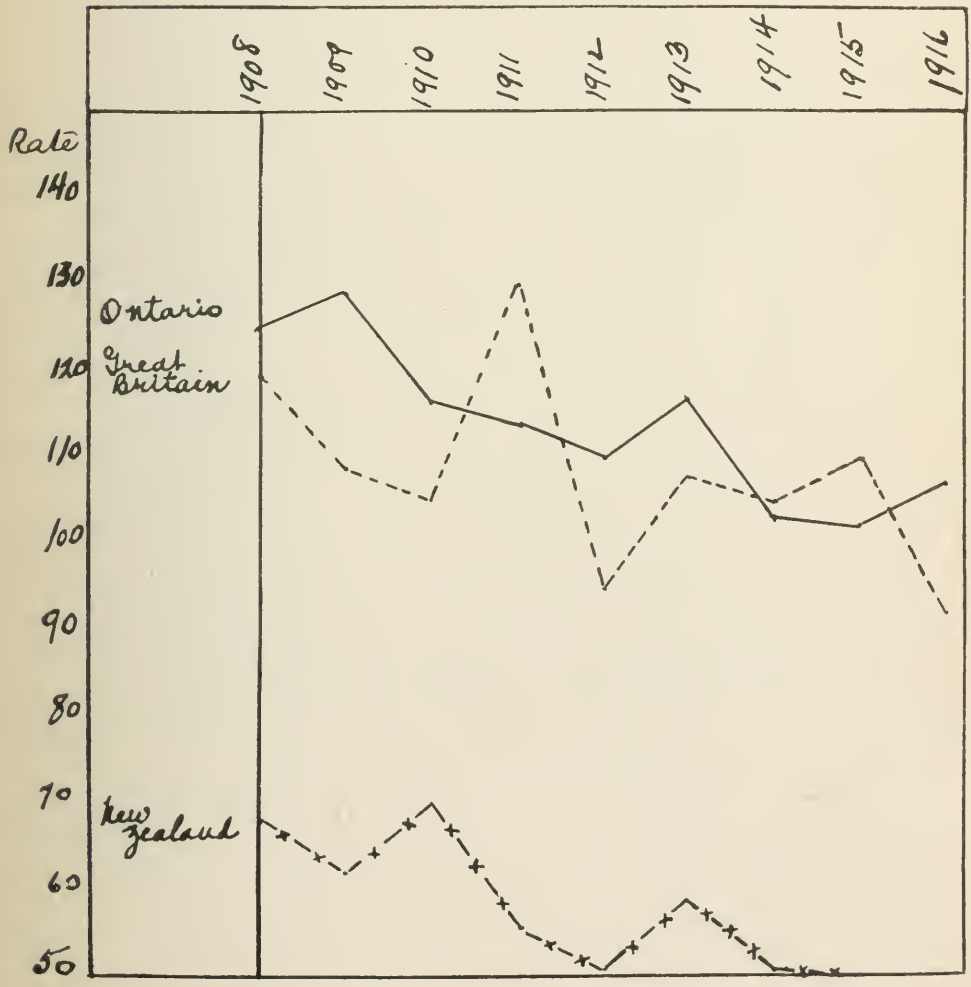
Sir

Your obedient servant,

MARY POWER,
Director Bureau of Child Welfare.

INFANT MORTALITY RATES (1908-1916).

Great Britain, New Zealand and Ontario.



EPIDEMIOLOGICAL DATA

DRS. R. W. NAYLOR and W. C. ALLISON.

PARATYPHOID FEVER EPIDEMIC IN BRANTFORD, SEPT. 16th, 1917

On September 16th, 1917, an epidemic of fourteen cases of typhoid fever was reported from Brantford.

The Cases.

On arrival I learned from Dr. Pearson, M.O.H., that in all twenty cases had been reported to him. Many others, exposed, appeared ill for a few days, but symptoms of typhoid or paratyphoid fever did not develop. All of the cases appeared within a few days of each other. Following a prompt investigation by Dr. Pearson and removal of the cause no more cases developed.

The Source.

As all cases, with the possible exception of two Russians, received their milk supply from Mr. Cusden, milk vendor of Brantford, milk was suspected of being the infective medium. Mr. Cusden received his milk from three farmers. Of these, the only place in which typhoid had occurred was in the Wright family of Cainsville. Mrs. Wright had a typhoid-like infection in August, 1917, contracted at Grimsby. No agglutination test was made then, so type of organism was not known. No other person about the place has ever had typhoid fever. Mrs. Wright is in bed at the present time and has never been well since her attack. This however is partly due to other causes.

As many of the cases are in families which receive the Wright milk exclusively, by special request, notably one family in which four cases occurred since Mrs. Wright's son at Cainsville was infected, and since no cases developed within a few days following stop of this milk supply, Mrs. Wright was undoubtedly the source.

Bacteriological Findings.

Examination of Mrs. Wright's serum gave the following results:

Typhoid B + 1:40 serum Positive—Moderate agglutination.

B Paratyphoid B + 1:40 serum, strongly Positive, complete agglutination in 60 minutes.

A Paratyphoid B + 1:40 serum—No agglutination.

The sera of two patients—one Mrs. Wright's son, the other Mr. Cusden's son—showed strong agglutinating powers with B. paratyphoid bacilli, moderate agglutinating power with typhoid bacilli, none with alpha-paratyphoid bacilli.

Fæces and urine of Mrs. Wright, the suspected carrier, were examined and pure cultures of the paratyphoid bacillus were obtained by plating. These cultures were completely agglutinated by a 1:60 dilution of the sera of two of the patients now ill.

Mode of Contamination of the Milk.

The milk cans and pails were placed in a sunbath daily on a bench outside the kitchen. This bench is twenty-five feet distant from an unprotected closet used by the family. Flies have been particularly abundant this last month, but not previous to that. This suggests a likely mode of contamination of the milk. The well, a drilled one, one hundred and eighty feet deep, appears beyond suspicion, as it is one hundred and fifty yards from the closet and well encased in concrete at the top.

W. C. Allison,
Asst. Bacteriologist.

TYPHOID FEVER IN DRAYTON, AUGUST 13th, 1917.

Having heard of a peculiar small epidemic in and about Drayton, through the local Officer of Health, Dr. Flath, I visited that place August 13th, to assist if possible in making a positive diagnosis of cause of infection, and to determine its primary source.

Cases.

I found a series of twelve to fifteen cases suffering from what was apparently a typhoid infection of only moderate virulence, as some cases were quite atypical in character, while others were fairly typical, with rose spots, splenic enlargement, abdominal tenderness, slow pulse, and temperature ranging from 99 deg. to 104 deg.

Symptoms had developed in cases dating from July 28th, to August 7th, and all cases had attended a Women's Institute meeting and supper at the home of Mr. Grose, a farmer near Drayton, on July 26th.

Drayton History.

There had been no previous outbreak of typhoid since four years ago when the river overflowed, and there had been no typhoid nor allied infection in Drayton prior to July 26th, 1917.

Grose Family and Farm.

All (5) had typhoid fever nine years ago, of fairly severe type and all recovered, Mrs. Grose being ill the longest. All have been fairly well since. Their land is almost perfectly level and they have two wells, one at the house and one at the barn, neither of which has been driven down to or through bed rock, but end in sand bottom. At the time of their illness a hopper and improvised tiling (unattached) carried away wash-water, etc., from the kitchen door past the well about 18 to 20 feet. This has since been removed. The privy which was some distance away had cement casing. There had been no hired help on the farm until last summer and this summer, with no previous history of typhoid in these people.

Picnic, July 26th.

At this meeting there were no people from other communities present and no one who had a previous history of typhoid except the Grose family. There was only one who had a previous family history of typhoid fever, one Mrs. Awde, who also developed the infection at this time.

The articles of diet served were sandwiches of salmon and lettuce, potato salad, ice cream and lemonade. All articles of food and drink were prepared by Mrs. and Miss Grose, except the ice cream which was only partly used. The remainder of the ice cream was later served in the village restaurant and caused no ill effects to people who ate it. Thus, the epidemic pointed markedly towards a carrier in the Grose family, or else to infected water, as most people partook of a great deal of lemonade, because of the extremely hot weather at that time, and for two days previous to that date. This last factor, extreme weather, could easily account for the short incubation period of the disease, i.e., due to lowered body vitality.

Diagnosis.

I obtained blood samples from some twelve cases, seven of which gave positive Widal reaction to typhoid bacilli, and five negative; all of which were negative to alpha and beta paratyphoid bacilli. The cases negative to typhoid were of the more atypical character and of shorter duration than the others.

Source?

Samples of water from the wells were obtained and both showed contamination of intestinal origin in 1 cc. quantities on two different examinations.

I obtained blood samples from the hired man and from Ethel and Harvey Grose, but could obtain none from the others, because of strenuous objection to such and to the obtaining of specimens of urine and faeces. The bloods I obtained were negative and with that the investigation had to end for want of further evidence as to the direct means of distribution of infecting organisms.

To my mind one or more of the Grose family is a carrier, but I cannot prove it for want of material evidence.

Control of Disease.

All infected cases were under control and were being looked after medically. The well water at the Grose farm was being boiled until a new well was drilled through the bed rock. All cases were doing nicely when last heard from.

Synopsis.

(1) Bacillus Typhosus proved to be the causative organism.

(2) Water in wells of Grose family showed contamination of intestinal origin in 1 cc. quantities on two examinations.

(3) Infection spread apparently from home of Mr. Grose, as all people ill had attended the Institute supper prepared by Grose family on July 26th.

(4) Organisms of moderate virulence only, as cases were not very severe in type.

(5) Investigation could not be completed because of inability to procure specimens from some of the Grose family, one or more of whom I suspect of being carriers, all having had previous history of typhoid infection.

(6) The work of Dr. Flath, the local Medical Officer of Health, during this epidemic is to be highly commended.

R. W. Naylor,
Bacteriologist.

Epidemic of Beta-Para-Typhoid Fever in the Townships of Essa, Innisfil, Vespra and Oro.

About October 8th or 9th, a widespread outbreak of para-typhoid fever occurred in the Townships of Essa, Innisfil, Vespra, and Oro. Within a week about sixty cases were reported. Some cases developed later and the total reached about eighty-five or ninety. They were roughly distributed as follows:

Cookstown District	18	cases
Thornton and Ivy District	35	"
Barrie and vicinity, about	15	"
Colwell and Utopia District	3	"

Cases which no doubt belonged to this epidemic were reported from Alliston, Elmgrove and other points in that vicinity. These cases occurred in people who had attended the Ivy Fair. The symptoms began at the same time and the disease ran the same general course.

Some cases were reported in which fever lasted for a few days only and were likely an abortive type of para-typhoid fever.

The Cases.

About 15 per cent. of the cases were severe. Severe and mild cases alike ran a course of about 21 days. Typical cases began with diarrhoea and nose bleed followed by fever, excruciating headache and pain in the back of the neck. Splenic enlargement, rose spots, general abdominal tenderness and coated tongue were seen in all cases. Delirium and toxaemic manifestations were rare. Complications were few. One child died of appendiceal abscess in the second week, one woman aborted, one case developed phlebitis.

The Source of Infection.

The majority of these cases were seen in young people and children who had attended the Ivy School Fair held on September 25th, that is two weeks before the outbreak. In thirty-five consecutive cases, all had been present at the fair. At this fair ice cream, only, was served to all. People brought their own lunches. Water was the only beverage used there by many people. On the supposition that either the ice cream or the water was the infective medium an inquiry was made. It was found that in thirty-five consecutive cases, thirty-four had eaten ice cream and the other case had carried an ice cream cone a quarter of a mile for a friend. On the other hand the water was used by only a few of those who became infected. The water was obtained from the Watson and the Arnold wells in Ivy. Examination of these waters showed B coli present, but typhoid or paratyphoid bacilli absent. Also, constant use of these wells has resulted in no other known cases of typhoid or paratyphoid fever. The ice cream then, seemed to be the only thing which required investigation.

The Ice Cream.

The ice cream was made in Barrie at the Olympia confectionery store. An inspection of the store and premises showed everything to be in a very sanitary condition. The three employees and the proprietor were all in apparent perfect health. None had ever had a typhoid infection. Examinations of their bloods

confirmed this, all giving negative Widals to typhoid and paratyphoid bacilli. There had been no changes in the employees for months. It was evident that the source was not here.

The Cream Supply.

The cream from which the ice cream was made was found to come from five farmers as follows:

(1) Roy Partridge, Crown Hill.
(2) A. W. Partridge, Crown Hill.
(3) Robt. Lightfoot, Little Lake.
(4) John Pratt, Penetang Road.
(5) Frank Rowe, Caldwell.

The first three places all gave negative histories for previous typhoid infection. The Lightfoot farm was, however, found to be in an extremely unsanitary condition. The J. H. Pratt family gave two histories of previous typhoid fever, both Mr. and Mrs. Pratt having had it about thirty and forty years ago respectively. Their present history was good. A stool from Mrs. Pratt showed no typhoid or paratyphoid bacilli. One place remained under suspicion.

The Frank Rowe Family.

At the onset of the epidemic Dr. Little, Medical Officer of Health of Barrie, stopped the sale of all articles of food from infected families. The sale of cream from the Rowe family was stopped on October 10th. This was due to the fact that Mrs. Frank Rowe was ill at home during the last week of August and the first two weeks of September. The attending physician, Dr. West, of Angus, diagnosed the illness (according to Mrs. Rowe) as typhoid jaundice. Her illness which occurred seven weeks after a normal delivery, began with headache, pain in joints and high fever. She became jaundiced and delirium followed. Stools were quite offensive during illness. She was in bed three weeks. Convalescence was slow. Her brother developed typhoid or paratyphoid fever after her recovery. His blood was not examined. Her brother-in-law on the next farm at Colwell Station developed paratyphoid about three weeks ago. His blood gave an agglutination with the Beta paratyphoid bacillus. Mrs. Rowe's blood was examined and gave a positive result to the Beta paratyphoid in a dilution of 1.80. It was negative to Alpha paratyphoid and typhoid. The urine and faeces of Mrs. Rowe were examined and Beta paratyphoid bacilli were isolated in pure culture from the urine. These organisms correspond in every way with cultures of Beta paratyphoid bacilli isolated from the stools of several patients now ill with Beta paratyphoid fever. They were almost completely agglutinated by a 1-80 dilution of the sera obtained from three patients in Barrie and Thornton. The same organism is found to be the cause of all cases examined with the exception of two patients now in the Barrie hospital. These patients came from distant points and did not seem to be connected with this epidemic.

Thus Mrs. Rowe is no doubt the source of the infection and is now a chronic carrier.

Cases from Eating Ice Cream Elsewhere.

The ice cream sold at the Ivy Fair was made in part cream obtained from Frank Rowe on September 21st, and on September 23rd. This batch, one hundred and fifty gallons in all, was frozen on September 24th and distributed as follows:

Ivy Fair	15 gals.
Barrie Fair	60 "
Elmvale Fair	25 "

Remaining 50 gallons were sold over the counter.

It is not yet clear why the Ivy fair people were more badly infected than the other fair people. It is known that 86 per cent. of recently isolated typhoid bacilli die in seven days when frozen and 58 per cent. die in three days. As the Ivy Fair was held the next day and the other fairs followed a few days later, this probably would help explain the occurrence. Infection depends to a great extent on the size of the dose of organisms.

A considerable number of patients attributed their illness to ice cream eaten at the Olympia in Barrie. Their history makes this seem very probable.

Secondary Epidemic in Allandale.

An interesting feature noted in this epidemic was the occurrence of a secondary epidemic. Alod Ferris a seven year old girl living near Barrie, stayed in Barrie a few days with her uncle. While there she had ice cream occasionally at the Olympia. About two weeks later paratyphoid fever developed. Dr. Little not having been informed of this, the sale of milk was kept up. Through a dealer this milk was sold in Allandale. Several cases of paratyphoid fever developed on his milk route later. The blood of this girl gave a positive Widal with Beta-paratyphoid bacilli and pure cultures of Beta paratyphoid bacilli were isolated from her stools.

Source of Mrs. Rowe's Infection.

The source of Mrs. Rowe's infection is unknown. Her sister had typhoid fever fifteen years ago. The sister's blood gave a fairly strong agglutination to the Beta paratyphoid bacillus. The urine and stools will be examined later, if it is possible to obtain them. As she was in contact with her sister before her illness there is a probability that she is the primary source. No other cases, however, have occurred in her vicinity so far as she could tell.

W. C. Allison, M.B.
Epidemiologist.

Toronto, November 29th, 1917.

Further Statement *re* Epidemic of Beta-paratyphoid Fever in the Township of Essa, Innisfil, Vespra and Oro.

I have read Dr. Little's letter with much interest. His criticism of my Barrie epidemic report would appear justified from the Widal reports sent to him.

In his letter he says, "we had in our hospital (Royal Victoria) three cases from the vicinity of Ivy that showed a typical Widal for typhoid and not for paratyphoid."

From this I would understand that he makes the Widal report the basis of his diagnosis between typhoid and paratyphoid fever.

The question naturally arises, how much reliance can we place on a Widal reaction. We know that under ideal conditions, that is, with separate serum, accurately and sufficiently diluted, and sixteen-hour cultures of organisms of proper strain, it is a very reliable method of differentiating between typhoid and paratyphoid. The one source of error, the presence of typhoid paratyphoid group agglutinins, can be eliminated by high dilutions as shown below:

SERUM 16215—MRS. G. B., IVY.

Dilution	Typhoid	A. Paratyphoid	B. Paratyphoid
1/90	Agglut. +	Agglut. —	Agglut. +++
1/160	Agglut., slight	Agglut. —	Agglut. +++

This blood was obtained by venesection.

When the dried blood method is used, however, the degree of error caused by group agglutinins is a big factor, as proper dilutions are difficult to make. When one considers that in the routine examination done in the Toronto and Kingston laboratories, no special precautions have been taken heretofore to guard against this error, there is no reason why a positive typhoid report might not be sent on a case of paratyphoid fever. Tests for paratyphoid have been done in these laboratories only when asked for.

We know that typhoid paratyphoid agglutinins were present in these serums as shown below:

Serum	Dilution	Typhoid	A. Paratyphoid	B. Paratyphoid
10213	1/160	Slight agglut.	—	++
10214	1/160	Slight agglut.	—	+++
10215	1/160	Slight agglut.	—	++

In October and November ten specimens of blood for Widals were received by the Kingston laboratory from the Royal Victoria Hospital, Barrie. Five negative reports were sent and five positive to typhoid.

In the same period, five duplicate specimens were received by the Toronto laboratory. Five negative reports were sent back. I would account for the 100 per cent. negative reports sent from Toronto by the relatively high dilutions of sera we make here, too high for the group agglutinins to agglutinate typhoid properly. In other words, I believe the positive results seen in the Kingston laboratory were due to typhoid paratyphoid group agglutinins.

Dr. Little also says "all our cases mostly from the town (Barrie) were not paratyphoid. As I examined the sera of three Barrie cases and all definitely agglutinated the B. paratyphoid in 1/80 and 1/60 dilutions, there is no doubt but that some were paratyphoid.

SERUM OF C. Q., BARRIE.—BLOOD OBTAINED BY VENESECTION.

Dilution	Typhoid	A. Paratyphoid	B. Paratyphoid
1/160	Slight agglut.	—	+++

In regard to the Allandale cases, that they were paratyphoid is not proven. One feels justified in considering them paratyphoid when their milk supply was obtained from a family, who it was proven had paratyphoid fever in the house.

I would welcome any effort made to settle this matter conclusively and would therefore make the following suggestions:

1. That two specimens of blood be taken from the (*a*) three patients from Ivy, whose Widals were reported positive to typhoid. (*b*) Fernan and Ostrander of Allandale. (*c*) Three or more cases in the town of Barrie.

2. That the blood be collected in Wright capsules which will be sent to the Medical Officer of Health, Dr. Little.

3. That the duplicate specimens be examined at two laboratories, one of them to be the Toronto laboratory.

4. That each serum be tested against typhoid and Alpha and B. paratyphoid bacilli in dilutions up to 1-160.

W. C. Allison,
Epidemiologist.

September 10th, 1917.

Typhoid Epidemic at Jordan Harbour.

On Sept. 10th, three cases of typhoid fever were reported to have occurred in the Boys' Home Camp at Jordan Harbour. On Sept. 17th a fourth case was reported. All cases were clinically typical of typhoid fever and gave positive Widal reactions. One case proved fatal on the twelfth day of illness.

On Sept. 12th, Dr. McClenahan, Dr. Addy and I. visited the camp which is the summer home of the inmates of the Boys' Home, 339 George St., to determine if possible, the source of the infection. We visited also the various places where the boys worked, and obtained supplies. One place only seemed suspicious, namely, the Fester place where the boys obtained water. Miss Fester had typhoid fever three years previously. Later evidence showed that the first case occurred in Miss Kerr who had never used this water. Miss Fester also was apparently in the best of health and the closet she used drained directly over a bank and was 100 yards distant from the well. The possibility of infection from this source was remote. The water from this well showed the presence of colon bacilli as did all the other wells in the vicinity.

The milk supply of the camp was obtained from the Culp family only. The cows were often milked by a Mr. Albright. *Mr. Albright had typhoid fever thirty years ago.* His wife died of typhoid fever ten years ago. Many of his hired men and girls became ill of typhoid after working at his place only a short time. As he lived alone, he was looked upon as a likely carrier. His blood was examined and gave a strongly positive Widal reaction. Several attempts were made to obtain specimens of his faeces but without success. Albright is no doubt a carrier and the fact that he "milks wet" would give ample opportunity to contaminate the milk.

The inmates of the Boys' Home were examined and no evidence of a possible carrier could be found.

(Sgd.) W. C. Allison,
Epidemiologist.

November 27th, 1917.

Epidemic of Scarlet Fever in Nobleton, School Section No. 19.

An outbreak of an eruptive fever was reported from Nobleton S. S. No. 19. An examination of several of the cases by order of Dr. Lockhart, Medical Officer of Health, resulted in three families being quarantined for scarlet fever. Owing to the diagnosis being disputed by the attending physician of one of these families, a report on the three cases was requested.

Cases in Dispute.

The cases in dispute occurred in the Holden family of Nobleton. The oldest girl, Winnifred, aged ten, returned from school Tuesday, November 27th, with slight nausea and malaise. Wednesday, the rash appeared and spread over her whole body except on the face, head and palms. These remained free. She did not vomit and felt no sore throat. Has had a "cold in the head" and has been hoarse for the last month. The eyes and conjunctivæ remained normal. The rash began to fade in about three days. Fever was present on the second and third days of illness. Examination made December 5th, showed no rash, but scaling of legs and arms. The tongue was covered by a white fur with enlarged pale papillæ projecting through it. The tonsils were enlarged and follicular in type, the pharynx showed a catarrhal inflammation. The superficial glands of the neck were all enlarged and hard. The blood showed no leucocytosis.

The urine contained no albumen but an excess of urates. A throat swab showed streptococci and a short solid bacillus.

A second case in this house occurred in Ethel Holden, aged 6. Onset December 2nd with nausea, did not vomit. The rash appeared Monday, and was all over body except on the face when first seen. Cheeks flushed and some fever was present. No pain on swallowing.

Examination showed a fading rash made up of minute points over body and limbs—face flushed, tongue had typical strawberry appearance. Minute red points were present on the hard palate. The tonsils were enlarged and congested and the pharynx showed a catarrhal inflammation. The lymph glands of the neck were all enlarged and hard. No desquamation to be seen. The urine contained an excess of urates, but no albumen.

The third patient was Alfred Holden, aged 7. Was believed to be well but looked dull and appetite was not good. An examination showed a typical pin-point rash, none on the limbs or face. The lips were dry, the tongue furred and the papillæ enlarged and red—pharyngitis present. The hard palate showed many minute red points. The neck glands were much enlarged and hard. Eyes and conjunctive normal. Urine contained an excess of urates but no albumen. A throat swab showed streptococci present in almost pure growth. The blood showed a slight leucocytosis.

Differential Diagnosis.

The diagnosis rests between mild cases of scarlet fever and rubella. The history of invasion, the absence of rash on the face, the character of the rash, the pharyngitis and the strawberry tongue favour scarlet fever. The punctate rash on the hard palate occurs in both diseases. The short period of invasion—one day or less—and the short duration of the rash—not over three days—could be

associated with either. The mild constitutional symptoms and the swelling of the post-cervical glands favour rubella.

The evidence at this house appeared very much in favour of scarlet fever. It seemed necessary to see more cases to confirm or disprove of this. As about ten cases in all were in the vicinity, an examination of these was made. A few points which will help in the diagnosis were noted in these cases.

Additional Cases.

Westbrook boy.—Onset with nausea and vomited once. Fever and sore throat developed that day. The rash appeared the next day. Rash was typical—had a definite strawberry tongue and pharyngitis. Leucocytosis of twenty-five to thirty thousand (estimate from blood smear).

Arthur Hill.—Sore throat, strawberry tongue, enlarged glands, fever, no rash.

George Hill.—Onset with malaise Sunday—vomited twice Sunday afternoon. Rash appeared on Monday morning. Examination showed typical rash on buttocks in groins, axilla and at bend of elbow. Typical strawberry tongue, catarrhal pharyngitis and adenitis present.

Pearl White.—Onset with severe "cold in the head" Saturday. Vomited once Saturday afternoon. Rash appeared Sunday with fever, and the throat became sore Monday. Suffered from headache considerably. Examination showed a pin-point rash absent on the face—pharyngitis, adenitis, purulent rhinitis, strawberry tongue, lips dry and inflamed. Rash just beginning to fade to-day—the third day.

Donald Archibald.—Onset Wednesday with vomiting. Rash appeared on body Friday, face was flushed and fever was present. No complaint of sore throat. Rash was gone by Monday. Examination showed a catarrhal pharyngitis with enlarged glands in the neck. Tongue almost clear of fur, with papillæ enlarged but pale, desquamation in arms and legs.

Mary Hoover.—Onset last Wednesday with dizziness and weakness in the afternoon, followed by vomiting. Rash was seen on the body Thursday when she awakened and it was accompanied by fever. Fever was less on Friday and the rash began to fade. No pain on swallowing. Examination showed large flakes of scales over the body and the cheeks. Scales were seen also between the fingers. Many of these scales have perforated centres. The tongue is clear, but fissured and shows large pale prominent papillæ. The pharynx is congested and the cervical glands are much enlarged and hard. Several other cases were seen but showed only one thing of importance in differential diagnosis, namely, the onset with vomiting.

These cases show many features which have a bearing on the diagnosis:

(1) The absence of eruptions on the face in all cases.

(2) The onset with vomiting noted in about half the cases.

(3) The typical appearance of the rash in all cases.

(4) The amount of the desquamation seen in two cases, its typical appearance and its occurrence between the fingers.

Taking all points into consideration, I believe there should be no hesitation in diagnosing these cases as scarlet fever.

W. C. Allison,
Epidemiologist.

October 2nd, 1917.

Acute Anterior Poliomyelitis at Rosemount.

Two cases of suspected cerebro-spinal meningitis were reported from Rosemount October 2nd. I went there the same night and found one boy dead after an illness of five days duration, and a second seriously ill. Both cases occurred in family of James Walker.

History of First Case.

Bert Walker, aged seventeen. Illness began Friday, September 21st, with headache, pain down spine and occasional vomiting. Had sore throat and cold in head a few days before. Symptoms remained about the same with also chilly feeling and pains in ears until Tuesday, but he was able to do the chores. Tuesday, September 25th, symptoms became more severe, paralysis of right hand and forearm muscles occurred. Dr. Blair was called and found him in stupor, cyanosed, some paralysis of tongue and pharynx, no rigidity, temperature normal. Later in day patient became comatose and died that night. Case was believed to be acute anterior poliomyelitis.

History of Second Case.

Roy Walker, aged 23. Illness began October 1st with severe headache and pains down spine with occasional vomiting. Paralysis of muscles about left hip occurred at onset. A few hours later loss of power of shoulder girdle group of muscles began and gradually became more complete. Later marked rigidity of back and photophobia developed.

Examination of Patient.

With Dr. Blair, I examined the patient and found opisthotonus, paralysis of the quadratus femoris, glutei, adductor, and hamstring groups. Deep reflexes not present, general muscular weakness. Kernig's sign present, Babinski's sign negative, moderate photophobia, injected conjunctivæ, inflamed throat, nasal discharge, temperature 101.5 deg., pulse 110, respirations about 20.

Spinal Fluid.

Lumbar puncture done—30 c.c. of clear fluid under high pressure, came away. As we suspected cerebro-spinal meningitis in spite of clear fluid, we injected 20 c.c. of anti-meningococcic serum. *October 2nd.* Patient mentally duller than usual. Loss of power of affected muscles more complete. General appearance worse. Thirty c.c. spinal fluid removed—still clear. Twenty c.c. of serum injected.

Laboratory Findings.

Fluid contained a very small number of small mononuclear lymphocytes, an occasional large lymphocyte, no leucocytes, no fibrin and no meningococci.

Diagnosis.

Acute anterior poliomyelitis.

W. C. Allison,
Epidemiologist.

August 23rd, 1917.

CASE OF CEREBRO-SPINAL MENINGITIS AT SOUTH RIVER.

History of Case.

Patient was Gladys Claridge, aged eleven. Illness began Wednesday, August 22nd, with general malaise. On Thursday had a chill followed by fever and general febrile symptoms—fever continued and on Sunday severe headache and pains in back began. Muscular rigidity of back with retraction of head, photophobia and delirium followed.

Examination of Patient.

In company with Dr. Cane, the attending physician, I examined the patient. Marked opisthotonus with general muscular rigidity and weakness were present, no paralysis, no anaesthesia. Reflexes were all present but sluggish, pupils slightly unequal. Skin of lips, cheeks and extremities cyanotic. Systolic blood pressure 116 and diastolic 92. Urine normal in S.G. and amount, no albumen. Slight cough, no sputum, lungs clear. Throat appeared normal, no nasal discharge. Temperature 101-102⁵, pulse 90-110, respirations normal. The infection appeared to be of average severity.

Spinal Fluid.

Lumbar puncture done August 28th. Fifty-four c.c. of opalescent fluid under increased pressure came away. Twenty c.c. of anti-meningococcic serum given.

The spinal fluid on standing showed fibrin formation and contained polymorphonuclear leucocytes with intracellular meningococci.

Results of Treatment.

Treatment as given by Dr. Cane consisted of hypodermics of morphine ½-¾ grains daily and good nursing. Following serum intraspinal injection there was marked relief from pain in twelve hours with lessened rigidity. Patient became more sensible but had periods of mental wandering.

August 29th.

Pains in back and headache gone, patient quite bright. General condition improved, colour better, and patient able to straighten her body. A second lumbar puncture was made by Dr. Cane. About 35 c.c. of opalescent fluid under pressure came away and was replaced by 20 cc. of anti-meningococcic serum. I saw the patient twelve hours later and she appeared improved in all respects.

Reports from Dr. Cane.

August 30th.—Patient received 20 c.c. anti-meningococcic serum.

August 31st.—Dr. Cane failed to enter canal. He reports condition improved, no paralysis, temperature about 101 deg. in the evenings, blood pressure remaining normal. Epistaxis occurred several times on August 30th and 31st.

September 5th.—Given the fourth and last injection September 1st, Dr. Cane had difficulty in introducing needle and as patient objected strenuously, this

treatment was discontinued. Temperature, pulse and respiration normal, no rigidity, no paralysis. Feeling well in every way except for general weakness.

September 20th.—Patient appears well in every way except for some general weakness.

Isolation of Family.

The mother and family were placed in a tent in backyard and were given urotropin gr. XVIII daily for prophylaxis as recommended by Flexner. No other cases appeared in the family or in the town.

W. C. Allison,
Epidemiologist.

January 15th-16th, 1918.

Epidemic of Diphtheria in Walkerville.

During the year 1917 the Town of Walkerville with a population of about 3,300, had seventy-five cases of diphtheria and eight deaths. Of these, seventeen occurred from January to June, and fifty-eight from June to December.

For the latter seven months the figures per month are:

June	13	cases,	no	deaths
July	6	"	3	"
August	3	"	0	"
September	3	"	0	"
October	17	"	1	"
November	8	"	1	"
December	8	"	1	"

In January, 1918, there were nineteen cases and one death.

As many of the clinical cases of the last two months centred about the King George School, an examination of this school was thought advisable. Dr. Hoare, of Walkerville, had already started on this school previous to my arrival in Walkerville. It was found necessary to go through the whole place (314 pupils) as the cases had been scattered.

The first examination of the King George School was made on January 15th and 16th. Two days later an examination of all those found negative on first examination was made, and one week later a third examination was made. Meanwhile, all absentees from the school were examined.

Children of seventy-eight families were found to be harbouring the diphtheria bacillus. In addition to this, five families were in quarantine for clinical diphtheria, and six for carriers, making in all ninety families. Three clinical cases were found to have occurred among the girls working in the Wilt Twist Drill plant. Eighteen carriers were found on examination, two of them being Windsor girls, and one a Ford City girl. Eighty-eight girls were examined.

On January 17th, a meeting was called of the Walkerville Board of Health, the school trustees and the town councillors. The Windsor Board of Health was invited. At this meeting the situation was talked over and it was decided to

examine the King Edward School. About 500 children attend this school. Seventy-two absentees were reported. No clinical cases had occurred in this school for several weeks. The next day an examination was made of the whole school and the following week a second was made. Children of sixty-three families were found to be carriers.

In September and October many of the cases of diphtheria centred about the St. Edward (Separate) School. No recent cases had occurred. An examination was considered advisable however, and resulted in finding carriers in eight families.

One case of diphtheria occurred in the Walker's Planing Mill and three in the Dominion Stamping Company. No carriers were found on examination.

The results of these examinations were that carriers were found among 242 healthy children in one hundred and fifty-four families.

A systematic examination of all members of these families was made in order to release them as soon as possible. This resulted in finding two hundred additional carriers mainly among women and children—fifty-two of these, however, were men.

In order to clear these cases as quickly as possible, a spray of Dichloramine T was used. The throat and nose after a preliminary cleansing was sprayed three times daily. A swab was taken 16-24 hours later. If negative, a second swab was taken, and spray was discontinued. If negative, the patient was released. If swabs remained positive, the spray was continued three times daily. In this way we were able to release all wage earners on an average under ten days.

The Dichloramine T spray was used on forty-one families. On an average, we obtained a negative swab three days following the use of the spray and were able to release the patient on the fifth day. Several children and babies with enlarged cryptic tonsils were found to resist this treatment. Also persons with nasal discharges.

Antitoxin was not used in the carrier cases. In only four instances did diphtheria develop. In one case, we believe, a clinical case could be traced to a carrier from the Wilt Twist Drill.

The organism most commonly found in the carrier cases was a solid type. Five families showed definite granular organisms corresponding to Westbrook's C. & D. types. Several families showed barred types usually corresponding to D_1 type.

The short cultivation period given the organism due to the rush of work would probably account for the small percentage of granular and barred types found.

Fourteen cultures were sent to the Provincial Board of Health Laboratories for virulence tests. All but two were so badly overgrown when they reached there, that it was found impracticable to attempt to use them. Of the two used, a growth was obtained in broth after 24 hours' incubation which, on the injection of one caused a guinea pig to appear ill for a day or more. The other culture had no effect on the guinea pig. These broth cultures were grown only one day instead of the usual three or four days so the result of these tests was unsatisfactory.

Schick tests were made on 56 persons who had never had diphtheria or antitoxin. Of these 50 were negative; 3 were faintly positive; 2 were strongly positive (brothers); 1 was indefinite.

This demonstrates that 89 per cent. at least are immune to diphtheria. Ordinarily about 25 per cent. only give negative Schick tests.

It was noted that of the one hundred and fifty-four families showing carriers, twenty-six had diphtheria in the family within the past year. Sixty-four carriers were found in these twenty-six families.

It was also noted that one-half of these families lived on two streets, thirty-nine living on Lincoln Road, and thirty-eight on Monmouth Street. Also, twenty-nine families were on Windermere and eighteen on Argyle, while the balance were scattered about the rest of the town. "Next door" cases were seen in twenty-three instances.

There has apparently been an improvement in the condition of the town. Four cases only have been reported for February. Three of these occurred in a family quarantined in January for carriers. All four occurred in the first ten days of the month.

At present there are no clinical cases or carriers in Walkerville.

W. C. Allison,
Epidemiologist.

MAJOR DAVID B. BENTLEY, C.A., M.C.
Died on Service Overseas, 5th April, 1917.

THE DISTRICT OFFICERS OF HEALTH PROVINCE OF ONTARIO

DISTRICT NO. 1.

Comprising the Counties of Lambton, Middlesex, Oxford, Elgin, Kent, Essex. District taken over temporarily by Dr. McNally.

DISTRICT NO. 2.

Comprising the Counties of Grey, Bruce, Huron, Perth, Waterloo, Wellington and Dufferin.

THOMAS J. McNALLY, M.D.

District Officer of Health, London, Ont.

I have the honour to submit a condensed annual report for the year 1917 for Districts Nos. 1 and 2.

During the year the cities and larger towns of the districts have all been visited and a general examination made of the water supplies and sewage disposal plants.

These are generally satisfactory, and with certain improvements may be made ideal.

Marked improvement has been made in Stratford's sewage disposal plant, though the humus tanks have not yet been constructed.

The care of their water supply has also received considerable attention.

The sewage disposal plant of Kitchener has been added to and this has considerably relieved the nuisance complained of in Snider's Creek.

The water supply of Guelph is now protected by chlorination which I suggest should be continued until such time as the source and pipe line are properly protected from contamination.

The operation of the Guelph sewage disposal plant is far from being satisfactory and is the source of considerable complaint from its contamination of the stream into which the effluent is emptied.

The Chatham water purification system does not operate as satisfactorily as it should. As far as I can judge, the plant has been gradually overloaded with an increased pollution of the raw water. I would advise that it be carefully gone over by the Provincial Engineer to determine what is necessary to improve the operation and suggest that his recommendations be then carried out.

From my observation of public water supplies, I would respectfully advise that a weekly or at least bi-monthly examination should be required, by the Provincial Board, of water samples, to be submitted by the Medical Officer of Health to one of the Provincial Laboratories. The result should be forwarded to the District Officer of Health.

All complaints as to insanitary conditions have been promptly investigated and in practically all cases the nuisances complained of have been abated and the cause remedied.

I have to report a continued and increasing interest taken by citizens in all matters pertaining to Public Health, Sanitation and Infant Welfare.

This interest is especially evidenced by the frequent communications I receive concerning conditions which a few years ago were tolerated by the laity as necessarily incident to life in villages, towns and cities, though dangerous to health and life.

Meat and Milk Supplies.

Slaughter houses and milk supplies are now receiving the general supervision of our local health authorities and marked improvement is apparent even in the smaller urban centres.

The sanitary condition of the schools, their out-buildings and surroundings are gradually improving under the annual inspections of our Local Health Officers. In only two cases has it been necessary for me to interfere in order to have the necessary improvements carried out.

The care and removal of manure in urban municipalities is now receiving considerable attention and conditions are improving. In some instances further improvement is desirable.

Communicable Diseases.

Smallpox.—This disease has not, during the year, assumed the proportions of an epidemic, though making its appearance in several municipalities.

Scarlet Fever.—During the year this disease has appeared in several municipalities, but in only one instance did it assume the proportions of an epidemic, and fortunately it was not of serious moment.

Tuberculosis.—The reporting of this disease is far from being as well done as it should be, and, while the medical profession generally recognize its communicable nature, it is surprising how frequently routes of transmission are overlooked by the general public.

Too much emphasis cannot be placed on early recognition and the public should be impressed with the frequency of recoveries under institutional treatment in these early cases.

Diphtheria.—Free antitoxin has materially lessened not only the incidence of, but the death rate from, this disease. The City of Windsor, the Town of Walkerville and the adjoining municipalities have been our chief source of trouble and the disease still appears to be endemic there. This is due doubtless to carriers. We have made several visits and advised with the local authorities and brought about some improvement in the situation, but the condition continues far from satisfactory.

Measles.—There have been several local epidemics of this disease during the year, but its prevalence has been much less than during last year.

Typhoid Fever.—There has not been any serious outbreak of this disease, though its incidence is altogether too frequent.

Mumps and Whooping Cough.—The reporting and quarantine of these diseases is yet far from satisfactory. In view of the recognized seriousness of the latter quarantine appears advisable.

During the year considerable attention and time has been given to endeavour to improve the sanitary conditions at Port Stanley and some progress has been made. The result of these efforts, so far, has not been all that we anticipated.

A serious nuisance was complained of at the garbage dump at Sarnia. The Sanitary Inspector has materially improved conditions, but the nuisance can only be corrected by incineration, which is under consideration of, and awaiting action by the council.

All of which is respectfully submitted.

I have the honour to be, Sir,

Your obedient servant,

T. J. McNally,

District Officer of Health.

DISTRICT NO. 3.

Comprising Norfolk, Haldimand, Welland, Lincoln, Wentworth, Brant, Halton, Peel, York.

Capt. D. A. McClenahan, M.D.

District Officer of Health, Hamilton.

Early in 1917 my district was favoured with a visit from the moving picture exhibit of the Provincial Board of Health. I am sure I cannot speak too highly of the educational value of this exhibit. We began the tour in February, with the opening meeting in St. Catharines, Ontario. Unfortunately, the machine did not arrive in time for the St. Catharines' meeting, so it had to be called off. We could not have it the next night because every night was filled and the advertising done in other places. We had everything in readiness for the second night at the Town of Thorold. We then visited the following places in the order named: Niagara Falls, Niagara-on-the-Lake, Welland, Port Colborne, Dunnville, Simcoe, Hamilton, Dundas, Waterdown, Stoney Creek, Grimsby and Beamsville. I had intended continuing the exhibit for some time longer in other places, but was unable to get the use of the machine and operator. It is certainly a very efficient way of popularizing the Public Health work and also a very efficient way of educating the public. The meetings were, in the main, well attended, except in one or two places where inefficient advertising had been done.

Early in April I was called to Jarvis, Ontario, to investigate the sale of alleged impure meat. It was a case where a cow had been ill of what was suspected to be milk fever. The cow was killed, when it seemed she could not possibly recover, and the carcass sold to the butcher in Jarvis. He cut up the beef and sold it. In conversation with the veterinary surgeon who attended the animal, he told me that the cow did not have milk fever and that he had advised the farmer that the carcass might be sold. The retail butcher seemed to be innocent of any intent to do wrong. While I was in Jarvis I inspected the butcher shops and found them in rather a dirty condition. The proprietors were given two weeks to clean up, and on a subsequent visit, I found things very much improved. I also visited a slaughter house just outside Jarvis and found the premises in such an unsatisfactory sanitary condition that the proprietor was notified by letter to cease slaughtering until his premises complied with the regulations. So far the slaughter

house remains closed. On my second visit to Jarvis I also went to Selkirk where a complaint had been made about a well being used as a cesspool. The owner agreed to discontinue use of the well and put in a proper septic tank. This has been done, I presume, as we have had no subsequent complaint.

I also made several visits to the Town of Burlington to look over the water situation. A report on the matter was made to the Department, in which it was recommended that the water be chlorinated, also that some cottages on the beach near the wells and pumping stations should be removed. The order for the removal of the cottages was made by the Provincial Board, but, so far as I know, the corporation has not seen fit to put it into effect.

Early in May I met the Council and Board of Health of Niagara Township, in the County of Lincoln. I found health matters in the township in very good condition. I might say that in the year 1917 the Women's Institute in the County of Lincoln have undertaken the work of medical inspection of the school children in the county. I understand that two qualified inspectors have been engaged to do the work. It is being done through the Department of Education.

The Town of Paris was also visited during the month of May. I spent considerable time there meeting the Council and Board of Health and also visiting waterworks, and making a survey of the town. The people are awake to the necessity of more stringent Public Health measures. The Medical Officer of Health is capable and energetic and I look for improvement in conditions in Paris.

I also, during the month, visited Mount Hamilton and conferred with the Council and Board of Health on matters relating to Public Health. On May 23rd I visited Caledonia to investigate some alleged cases of diphtheria. I found some ground for complaint and recommended closer quarantine of two families. While in Caledonia I also visited the Caledonia creamery and found the same very clean and sanitary. I also visited the cattle yards at G. T. R. and the bakeries, butcher shops, etc., in Caledonia.

While the Baby Welfare exhibit was on in Hamilton, I visited the meeting and gave an address on June 25th on "How Disease is Spread."

In July I visited Port Dalhousie and had a talk with the Council and Board of Health. They are rather behind in Public Health matters. I am hopeful of improvement.

There were some cases of typhoid fever in Niagara-on-the-Lake in July and it was suggested that it might be due to milk infection. I visited all the milk dealers supplying milk to the town, but could not satisfy myself that it arose from that source.

I visited Smithville on July 9th and conferred with the Council and Board of Health of South Grimsby. The meeting was a very harmonious one and satisfactory in every way. On July 11th I made another tour of inspection in the Town of Paris.

On July 30th and 31st I visited Grimsby and the Township of Barton in connection with a septic tank at Grimsby and a large ditch at Barton. Reports were made to the Department in each case.

During the month of August I made several visits to Walker Hall near Beamsville, which was the home where the girls who assisted the farmers in picking the fruit, etc., were located. A case of typhoid had developed in one of the inmates. I recommended inoculation of all the young ladies and a large majority submitted and were so inoculated. I think it would be a good plan if the District Officers of Health were notified when such camps were to be opened,

that the boys and girls might be inoculated at once, or else have it done before they congregate together.

A number of boys from the home on George Street, Toronto, had a camp on the water front near Jordan. They come there every summer, to the number of about twenty-four, and are very useful, inasmuch as they are engaged by the farmers in the neighbourhood to assist in harvesting the fruit, etc. Two cases of typhoid fever developed among them and with the assistance of Dr. Addy, of Jordan, and Dr. Allison from the Laboratory in Toronto we were able to demonstrate that the infection, very likely, came through the milk supply. A man who occasionally helped with the milking was found, on examination of the blood, to give a positive Widal. He gave a history of having had typhoid about twenty years before. His wife had subsequently contracted typhoid and died. The cases of typhoid among the boys were milk drinkers. The presumption was that the man infected the milk while milking.

The above represent some of the activities of the District Officer of Health during 1917. A number of other complaints in different sections of the district were investigated. The work now includes quite a large correspondence with the local Medical Officers and others in the district.

D. A. McClenahan,

District Officer of Health.

DISTRICT NO. 4.

Comprising the Counties of Prince Edward, Hastings, Northumberland and Durham, Peterborough, Haliburton, Ontario, Victoria, Simcoe and Muskoka.

Geo. Clinton, M.D.

District Officer of Health, Belleville.

I have the honour herewith to submit for your consideration a summary of my work for the year 1917, District No. 4.

All the principal centres have been visited, and all public institutions inspected and reported on, in detail, to the Provincial Board.

Health Exhibits.

I started out with the Health Exhibit early in January, and visited the following places. The attendance satisfactory, showing that the public are becoming more interested in Health conditions.

Jan. 16, Bronson, N. Monaghan Tp., 3 p.m. and 8 p.m.; full houses.
" 17, Hastings, 3 p.m. and 8 p.m.; full houses.
" 18, Campbellford, 3 p.m. and 8 p.m.; full houses.
" 19, Sterling, 3 p.m. and 8 p.m.; full houses.
" 23, Marmora, too late for 3 p.m.; full house 8 p.m.
" 25, Wellington, electric light not available; hence no exhibit.
" 26, Frankford, 3 p.m. and 8 p.m.; crowded houses.
" 31, Deseronto, 3 p.m. and 8 p.m.; crowded houses.
Feb. 1, Belleville, hall not large enough for 3 p.m.; 8 p.m., about 200.
" 6, Port Perry, 3 p.m. and 8 p.m.; both meetings full house.
" 7, Beaverton, 3 p.m. and 8 p.m.; full house.
" 8, Cannington, full house at 3 p.m. At 8 p.m., small house; counter entertainments.

Some of the above places had been visited before. Had we some new films it would be more attractive.

Public Institutions.

Detailed reports have been sent for the following:—

Hospitals.—Collingwood (Marine and Isolation); Oshawa, (a large wing under construction); Barrie, no change; Belleville (separate Nurses' Home); Cobourg; Port Hope (separate Nurses' Home); Lindsay, (separate Nurses' Home); Orillia; Bowmanville; Penetanguishene; Midland; Peterborough (two General and one Isolation).

Gaols.—Picton; Belleville; Peterborough; Cobourg; Whitby; Lindsay; Barrie.

Houses of Refuge.—Picton; Belleville; Cobourg; Whitby; Lindsay; Beaton; Lakefield.

Asylums.—Cobourg; Whitby; Orillia; Penetanguishene.

Children's Aid and Orphanages.—Peterborough; Belleville; Barrie; Picton (True Blue Orphanage).

Munition Plants.—Trenton; Lindsay.

Special Visits.

January.—Oshawa: *Re* typhoid and anthrax, and tannery waste.

May.—Midland: *Re* complaint unsanitary stable. Dr. Little at Stroud *re* complaints of a tuberculosis patient exposing the public to infection. This was arranged satisfactorily.

May.—Napanee: *Re* nuisance complained of by the town. All differences between the town and company had been settled the day before my visit.

Orillia: *Re* quarantine of scarlet fever.

August.—Bowmanville: *Re* plumbing in school. A first class building, well equipped, but plumbing bad. Advised modern plumbing forthwith.

The Corby Distillery Co.: *Re* pollution of river from stables. Cattle had all been removed.

Brighton: *Re* canning factory.

September.—Oshawa: Waterworks and tannery waste. A new filtering plant under construction. The tannery has built 3 sedimentation tanks 60 by 10 ft. by 8, with 4 modern filter beds 30 ft. by 90 ft. for all fluids from sedimentation tanks. All sludge from these beds is carted away, and appear to be working well. Effluent clear.

October.—Victoria Road: By special instruction I visited this place, when I found that diphtheria had been prevalent for months. In March, 5 cases, 1 death. Again in June, 14 cases. Supposed to be caused by ice cream. Another outbreak in September, 4 cases and 1 death. I visited this place October 2nd, and at that time 3 cases were convalescing.

They have a Union School for 3 townships, and all the cases were confined within this area. I met the local Boards of Health and advised opening the school, taking swabs from each child's nose and throat, the teacher and all children old enough to play outside: to release none from quarantine until negative swabs had been procured according to the regulations. Dr. Ross took charge and no other cases have been reported.

Laxness in quarantine was evidently the cause of different outbreaks.

No cases were reported from Kirkfield. All were in Carden, Bexley and Eldon Townships.

Typhoid.

January.—Oshawa: A mild outbreak, 4 cases. Supposed to be due to infected water. Free chlorination of the water checked it. One nurse in the hospital died.

October.—Townships of Essa, Innisfil, Vespra and Oro, Simcoe County.

Beta Para-typhoid in Simcoe County.

A widespread outbreak occurred, about 75 cases. All had attended a School Fair at Ivy, and had partaken of ice cream procured from the Olympic Restaurant in Barrie. After an extended investigation made by Dr. Allison (Epidemiologist) he discovered a carrier who had been furnishing cream to the restaurant.

Also a few cases in Barrie and Allandale, due to milk.

November.—Orillia: A number of cases caused by milk from a dairy where there had been typhoid. After this milk supply was stopped, no new cases developed.

Measles.—Very prevalent, but poorly reported.

Scarlet Fever.—Only isolated cases.

Whooping Cough.—A number of cases, but not reported.

Smallpox.—Only isolated cases.

Tuberculosis.—Not reported.

Rabies.—At Bowmanville: Dogs all quarantined.

At Peterborough City: Dogs all quarantined. One child died without treatment.

Peterborough County, Smith Township: Several animals have died. The dogs have not been quarantined.

At all places visited, I notice a marked improvement in general sanitary conditions, more especially in the condition of slaughter houses. Milk by-laws have been passed in a number of places.

Water filtration plants have been installed in Orillia, Lindsay and Oshawa.

Sewage disposal plants have made very little progress. Good Sanitary Inspectors are very much needed in different places. In my district there are only three Sanitary Inspectors paid a fair salary for their whole time. They are doing good work and are giving satisfaction to the public.

Where I have been able to get regular garbage system introduced, it has given great satisfaction.

Since the beginning of the war, each year, there have been increased calls for money, Patriotic and Red Cross work. Yet I am pleased to say the general sanitary conditions are much improved. The public are beginning to realize the importance of Child Welfare, which will mean so much to this country.

Could we obtain a Health Insurance Act I believe it would be of great assistance in our work.

All of which is respectfully submitted.

GEO. CLINTON, M.D.

District Officer of Health.

DISTRICT NO. 5.

Comprising the Counties of Lennox and Addington, Frontenac, Leeds and Grenville, Dundas, Stormont and Glengarry, Prescott and Russell, Carleton, Lanark and Renfrew, and the City of Kingston.

PAUL J. MOLONEY, M.D.

District Officer of Health, Cornwall.

I have the honour to herewith submit my yearly report for the year 1917 of District No. 5. The district has a population by the last census of 326,958 people.

Outside of the urban population the residents are almost entirely engaged in farming.

In the towns and cities we have a fairly large percentage engaged in the various manufacturing concerns, principally in cotton and paper mills and in the different iron working establishments and in smaller numbers in lumber mills, furniture factories, woolen mills, etc.

While in the northern part of the district we have large settlements of Germans and Poles and in the counties near to the inter-provincial boundary, still larger communities of French-Canadians, the great majority of the population are of British and U. E. Loyalist descent.

Almost all the villages, towns and cities are situated on some large or small river, with which this part of the Province is abundantly supplied, but in the great majority of cases their municipal water supply is more or less contaminated by sewage pollution from other urban centres farther up stream. Most of the towns installed their sewage system a number of years ago and without proper disposal works being included as part of the plant. These conditions have been allowed to continue owing to the war and the difficulty of financing works of this character.

To guard the health of the inhabitants the establishment of filtration and chlorination plants for public water supplies is becoming general, Smiths Falls having installed a system during the current year.

No new municipal sewage systems have been installed in the district during the year or disposal plants in connection with those already established.

The inspection of milk, meat and other food products in the district is fairly satisfactory, but no progress during the year was noted.

A marked improvement in the character of the slaughter houses and the establishment of several new and up-to-date plants was noted, although there are still great numbers of the old fashioned kind that are a constant menace to the public health.

The District has been unusually free from outbreaks of communicable diseases of an epidemic character, an outbreak during the summer of infantile paralysis in the counties along the lower St. Lawrence and an outbreak of smallpox in Hawkesbury and vicinity, being notable exceptions.

The Public Health, besides the routine work of a District Officer, has been promoted during the year by a series of public lectures and the distribution of pamphlets and other literature dealing with health problems.

The recent amendments to the Health Act giving the Provincial Board more control over the Local Health Officers has had an excellent effect. While the great majority of Health Officers are hard working and efficient, some are very

indifferent and formerly treated the advice and direction of the District Officer with indifference and unfortunately were backed up in this attitude by their councils who often gauged the suitability of their Health Officer by the amount of expense they were put to by the Local Board.

A detailed report of the work performed in the District has been sent to the Chief Officer of Health, Dr. McCullough.

During the year a sanitary inspection was made of twelve hospitals, two asylums, seven houses of refuge, six orphanages and children's shelters and seven gaols. Faults in construction, lack of equipment and any unsanitary conditions were brought to the notice of the proper authorities and the necessary changes ordered.

A routine sanitary inspection has been made of all the principal towns and villages and also of others when special conditions called for it.

The following matters are of more marked import and call for special mention:

Westboro Drainage and Water Supply.

This District if incorporated would contain a large town population and in the summertime might attain the status of a city as far as population is concerned. It contains an unusual number of fine residences, business houses and many fine schools. It lies directly above the City of Ottawa and borders on the Ottawa River and above the Ottawa waterworks intake.

There are no municipal sewers or waterworks.

The well-to-do have wells, septic tanks and sewer beds all on their own lots which in many cases are of small area and built on in clusters.

The conditions are unprecedented in the Province and constitute a menace, not only to the residents themselves, but also to the people of the City of Ottawa.

In my opinion the only rational and eventually the inevitable procedure would be for this district to unite with the City of Ottawa. I have repeatedly interviewed the authorities of both municipalities in an endeavour to bring this about and while both seem to be agreeable to the project, the question of terms has stood in the way. In the meantime, large numbers of residences are having private plants installed at considerable expense to the individual householder. Naturally each resident going to this expense will be averse to union and by his influence render an agreement just so much more difficult. I hope for a settlement which will abate conditions next year.

Summer Resorts.

This District is particularly rich in beautiful summer resorts, the finest in the world, which are not only frequented in great numbers by Canadians but also by a continually increasing stream of summer residents from across the border. Large numbers of palatial summer homes with all modern conveniences are being built and in every case the contamination of the different waters is guarded against. The most difficulty has been found with the transient visitors and they require and receive from the local Health Officers and myself, constant supervision.

The Thousand Islands and Stanley Island and the intervening islands in the St. Lawrence have been inspected, also the mainland resorts of Hamilton Island, Hopkins Point and Stonehouse Point, the resorts on the Rideau, Charlton and Christie Lakes and those along the upper reaches of the Ottawa River.

Water Supply of Towns on the Ottawa River.

Pembroke has had no trouble with their water supply this year, the military authorities taking extra precautions to prevent contamination of the supply from the military camp at Petawawa.

On the lower Ottawa the serious conditions at Rockland, due largely to the use of the raw Ottawa River water as a household water supply, have required drastic action on the part of the Provincial Board. A purification plant will be shortly installed.

In marked contrast with the proprietors of the industrial plant at Rockland was the stand taken by the Riordon Company at Hawkesbury, where conditions are almost as serious. They were most anxious that a municipal filtration plant be installed and expressed a willingness to bear part of the expense themselves. Negotiations are now in progress for installing the plant.

In this connection I think the Assessment Act should be so amended as to bring all exempted properties under the same provision as that applied to school taxes, when the money raised is to be used for sanitary purposes, these to include water and sewerage systems.

Public Health Exhibit and Lectures.

Much interest was aroused and good results should ensue from the public lectures given at different points and those given in connection with the well-known Public Health Exhibit of the Provincial Board of Health. The moving picture exhibit in connection was well managed by Mr. Ed. Jones, of the Chief Officer's Department.

In Ottawa, where the exhibit ran for a week, and at Renfrew, where it was shown during the time the fair lasted, large crowds visited the exhibit and attended the public lectures.

Communicable Diseases.

During the year the following list of diseases was reported from this District by the secretaries of the various local Boards of Health.

Small Pox	62
Scarlet Fever	69
Diphtheria	321
Measles	340
Whooping Cough	115
Typhoid Fever	87
Infantile Paralysis	16
Cerebro-Spinal Meningitis	12

It is quite evident from the above list that in the case of certain diseases such as whooping cough and measles great neglect was shown by physicians in reporting their cases. I do not think that any procedure short of court action will suffice to correct this laxity.

Infantile Paralysis.

This disease became epidemic during the summer months. Its probable source was Ogdensburg or Massena where it had been epidemic for some time. Most of the cases were of a very mild character and were not recognized as such by the

physicians in attendance. This, no doubt, had much to do with the spread of the disease. There were probably all told about sixty cases during the present year all along the front counties.

The first cases were noted near the Village of Cardinal where one child died of a disease stated by the physicians to be "marasmus," but which I have no doubt was infantile paralysis. The next case was well marked and occurred in the adjoining house. One family of seven children were all affected in Edwardsburg Township. This case was very unusual as to the number in the family affected. Probably a dozen cases occurred in the Town of Cornwall.

In many cases the local officers had all the schools closed. On my advice the schools were re-opened, the assistance of the teachers secured to keep a tab on all the children and thereby cases were more promptly located. I find this method much more effective than the old one of closing the schools.

Strict quarantine of the patients, thorough disinfection and screening of all windows and doors, the only means at present known, was adopted in all cases to prevent the spread of the disease. We had six deaths, but the resulting paralysis in those who survived was in most cases very slight.

Smallpox.—This disease was epidemic in the Town of Hawkesbury in October, November and December of this year. The source of the infection was evidently from a locality in the Province of Quebec. A workman coming from that Province secured employment in the Riordon Paper Mills and soon after developed the disease, which later spread among his fellow workmen. I was not informed of the outbreak until October 24th, when on visiting Hawkesbury I found ten cases diagnosed. The disease, however, had secured a good foothold and before it was finally stamped out towards the end of December there were 248 cases developed, but no deaths.

Most of my time for two months was spent in connection with this outbreak.

Nearly five thousand vaccinations were made, a proclamation being issued by the Town Council making this compulsory.

Many of the cases were very mild and there was much concealment, but I gave orders and they were carried out, that all parties not reporting cases in their families be prosecuted. A fine of twenty-five dollars in every case had an excellent effect.

A charge was made for vaccination by the local physicians and to speed up the work I volunteered my services and vaccinated at the rate of three hundred a day free of charge, until the town had been pretty thoroughly protected. I received every assistance and co-operation from the local authorities possible.

Respectfully yours,

P. J. Moloney,

District Officer of Health.

DISTRICT NO. 6.

Comprising the Districts of Temiskaming, Nipissing, Parry Sound and Sudbury.

W. Egerton George, M.D.

District Officer of Health, North Bay.

Sudbury, Ratter and Dunnet and Coniston supplied the majority of the smallpox cases.

Sudbury with its important railroad connections is the centre of a large section and contains nearly all the physicians within that area. It is, therefore, hardly to be expected that communicable diseases will exist in the neighbourhood without appearing in Sudbury also. As this is precisely what takes place a financial responsibility is thrown upon the municipality to care for these. The Health Act as at present constituted does not offer the city fathers any solution. Indeed, Sudbury may become—is very likely to become—a menace at times to unaffected sections of the district.

Ratter and Dunnet is a municipality without a Health Officer. The nearest physician is at least nine miles away, and was not able to act for them. The result was that the disease had considerable start before my attention was called to the condition. After making several visits to the municipality without being able to get sufficient action out of the Council to control the outbreak; thorough vaccination of both townships was recommended and slowly carried to completion. Reasonably strenuous efforts were made to secure the services of a physician for this work, offering each his own terms, but with no success. Rev. Father Seguin then began the task and carried it to completion. I was not able to approve of this arrangement, but since no other solution presented I took no efforts to prevent it. I am satisfied that the work was thoroughly and completely done without a single seriously sore arm. All misses were re-vaccinated with fresh vaccine; and it was a very exceptional case that did not react. I feel certain that these townships will not suffer again with this disease for many years.

Coniston is a company town without municipal organization situated at the Mond Nickel Company's smelter and within the United Townships of Garson and Neelon. The epidemic here began in a very mild form and it had gained quite an impetus before it was discovered. The company physician, Dr. Cameron, who is also Medical Officer of Health for the townships, immediately instituted energetic measures and vaccinated a large section of the Township of Neelon in which Coniston is situated. Over 1,100 vaccinations were performed. The efficiency of Dr. Cameron's measures both in checking the spread and protecting against future outbreaks will have the whole-hearted support of the Department. The only regrettable feature was the fact that only one weekly return was made by the Secretary of the Local Board.

Diphtheria.—Diphtheria could hardly be said to have reached the proportions of an epidemic anywhere, but the death rate was much higher than last year. A few cases were reported again from Sprucedale where the disease has existed off and on for several years. The evidence would suggest one or more chronic carriers.

An interesting fact came out during a small outbreak at Monteith during the latter part of November. One child, a girl of seven years—in the family of Mr. S.—was in a dying condition when the physician, Dr. Armstrong, of Matheson, was called (Nov. 22nd). Another little girl of five was ill. Immuniz-

ing doses of antitoxin were administered to the balance of the family with the exception of the father—the mother and two sons. I visited the family with Dr. Armstrong on the 27th. The little girl was still ill but greatly improved, while the mother who had been immunized had sore throat and membrane. You will notice that this was five days after the antitoxin. The younger son came down two or three days later, and the elder a week later or twelve days subsequent to the antitoxin. The father who was immunized by me on the 27th, with 2,000 units developed the disease on Dec. 2nd. In the four members of the family who were immunized symptoms of diphtheria developed, but did not last longer than a day or two.

Scarlet Fever, Measles, Whooping Cough and Tuberculosis.—The very favorable returns for these diseases was no doubt largely an accident partly due to faulty returns.

Typhoid.—Sudbury, Parry Sound and Haileybury supplied the great majority of this year's typhoid. The water supplies for these towns are far from good. No municipalities within this District have much worse. Parry Sound which had such a large epidemic last year is probably the most notorious in this respect. Year after year the Grim Reaper has exacted his pound of flesh and yet they continue to offer him these yearly mortgages on the lives of their people, instead of paying with cash. During the year they have had engineers working out schemes toward a solution of their difficulties. It is to be hoped that active measures will immediately be taken to put them into force.

An outbreak in an unorganized village known as the Wye occurred in the spring. Returns are not often made from unorganized territory and the numbers here given are not included in the figures quoted above. The village was using the polluted waters of the Abitibi River which will be described later. Shallow wells were partly depended upon for a water supply, but these served principally to catch surface water from the surrounding backyards which were usually filthy and not free from human excrement. House to house visits were made by Mr. White and myself to warn the people against using the raw water. But in spite of our warnings and the emphasis of twenty prosecutions for unsanitary conditions twenty cases developed with seven deaths.

DISTRICT NO. 7.

Comprising the Districts of Kenora, Rainy River, Thunder Bay, Algoma, Manitoulin and Patricia.

Major Robert E. Wodehouse, M.D., Port Arthur (now on active service C.E.F.). District taken over temporarily by Dr. George.

I have the honour to submit for your consideration the fifth annual report for Districts Nos. 6 and 7.

It is a matter of regret that I have been unable to reduce the excessive mileage which I have to report from year to year, as it is apparent that the time thus rendered without effect is not inconsiderable. Within the year I travelled 28,220 miles, which cost the Department $978.49. Of this, 11,300 miles were within Dr. Wodehouse's territory (now on active service) while 16,920 were within District No. 6. The expenses incurred were in the proportion of $380.65 for District 7 and $597.84 for District 6.

Communities within the unorganized territory where Provincial officials alone represent the sanitary organization have revealed important responsibilities to your District Official during the past year which hitherto were much less evident. Serious conditions produced by large corporations and which could not be corrected without the expenditure of many thousands of dollars, demanded firm measures, a great deal of time and the full support of the Department. Much was attained; much still remains to be done. The mortgage thus placed upon our time will not have been in vain if the coming year gives us proportionate action on the part of these companies and communities.

Communicable Diseases.

The total number of returns for communicable diseases were as follows:

	Dist. No. 6		Dist. No. 7	
	Cases	Deaths	Cases	Deaths
Small-pox	35	0	8	0
Scarlet Fever	7	0	219	3
Diphtheria	70	11	41	3
Measles	91	2	382	0
Whooping Cough	10	0	118	1
Typhoid	32	5	22	1
Tuberculosis	6	1	16	13
Infantile Paralysis	0	0	1	0
Cerebro-Spinal Meningitis	1	1	4	4

Smallpox.—Smallpox occurred at Bruce Mines, Thessalon, Blind River and in the neighbourhood of these three places. A case or two also occurred at Fort Frances. These cases were few and widely distributed. In each place the occurrence was made justification for the vaccination of a large number, especially at the schools. At Fort Frances the Board of Health was backed up by the School Board in an order that all children must be vaccinated before returning to school. Certain anti-vaccinationists were in distress as the truant officer was threatening to prosecute for the non-attendance of the children. The frequency with which smallpox comes across the line from Minnesota at this point is ample reason for the order. It is to the credit of the Legislature that these conscientious objectors are not allowed to present a menace to others in this Province.

Scarlet Fever.—Almost all the scarlet fever cases came from Fort William, Fort Frances and Keewatin. In Fort William they had 130 cases with 2 deaths. It was noteworthy that the disease was largely limited to the coal dock area where it was most difficult to get any co-operation from the people, who are mostly foreigners. It finally became necessary to quarantine this section of the city and prevent them from coming in contact with people from the better sections. Nearly all cases were sent to the hospital where they were kept at least six weeks and in some complicated cases much longer. But in spite of the care in returning them to their homes this important fact became more and more evident, that many children produced secondary cases in their homes after returning from the hospital. I am strongly of the opinion that six weeks is insufficient for scarlet fever and that our quarantine period should be extended to a minimum of eight weeks.

The Fort Frances epidemic was very mild. There were no deaths although there were many very sick cases. Some of the physicians called it Duke's disease. The Health Officer took the stand that all such cases were scarlet fever and ordered the houses placarded for scarlet fever.

In Keewatin the epidemic was also very mild; the child that died being almost the only sick case.

Diphtheria.—The number of cases were few and the death rate small.

Measles.—Of the 382 cases in the District during the past year 324 came from Port Arthur and Fort William. The disease began apparently among the soldiers and rapidly spread throughout the City of Port Arthur. The method of controlling the disease in this city is worthy of note. Dr. Laurie, Medical Officer of Health, notified all the school teachers that hoarseness and cough was "reason to suspect" measles now that there was an epidemic on. The teachers were requested to send all showing such symptoms home and to notify him. These were quarantined on suspicion for a few days and if no rash developed they were given a certificate and returned to school. A nurse visited the schools to see that the teachers were carrying out the orders of the Health Officer. In a few cases teachers had to be severely reprimanded and even threatened with police court proceedings before complete co-operation was established. The Health Officer considered that the teacher had not done her duty if the child had been at school on the day previous to the one on which the rash appeared. Apparently there was a very rapid falling off in the number of cases when this system got into operation.

The Fort William epidemic was very probably a spreading of the disease from Port Arthur. It began toward the decline of the Port Arthur outbreak and reached its climax in April or about the first of June.

Whooping Cough.—The only outbreak of importance occurred toward the last of the year in Fort William. We have no record of any deaths having taken place from this disease in Fort William, although they had 112 cases.

Typhoid.—With only 22 cases in the District and one death typhoid control has reached a degree of perfection deserving of the highest praise. Port Arthur and Fort William particularly deserve mention in this regard as this is the first year that they have been able to report no deaths from typhoid. Port Arthur had no cases directly from the city, using city water. One or two cases were received in the hospitals from vessels in the harbour. The grand result obtained is a fitting climax to the strenuous efforts that have been put forward by the Health Officers and Boards of Health of these two cities. As the decline has been steady its disappearance has all the indications of permanency. The achievement will stand for many generations as a monument of honour to all those who have had a hand in it. Of the five cases reported from Fort William for the year all could be traced to harbour water.

Cerebro-Spinal Meningitis.—Four cases were reported from this District and one from District 6. There were five deaths. The chances of life in this disease unless taken in the first three days is probably not more than twenty per cent. Military authorities have been able to obtain comparatively good results by early lumbar puncture and the administration of Flexner's serum. Such prompt measures are not likely often to obtain in civil life.

The reporting of communicable diseases is still far from satisfactory. For example, Matheson reported only two cases of measles with one death. One cannot receive such reports without suspicion. Coniston (Garson and Neelon) reported

thirteen cases of smallpox on one card. That the returns were neither made promptly nor complete is very probable. Kenora made but two returns for the year, while I do not believe that I received one return from the City of Sault Ste. Marie.

I feel that I should not pass on without calling attention again to the handicap placed upon your District Officials due to the lack of access to birth and death returns. Infant mortality and the death rate from other preventable causes within the District should be statistical evidence familiar to every District Officer. The supplying of this information would materially increase their efficiency.

Water Supplies.

Haileybury had some trouble with corrosion of house connections and toilet flush boxes. I communicated with the Department and Mr. De Laporte came up. Some few tests made on the ground showed that the water was decidedly acid. He took other samples to Toronto in order to get further evidence as to the cause of this acidity. It was found that a large proportion of the acid was due to the alum which was not being neutralized by the lime before passing through the filters. If sufficient lime was not added to neutralize the alum it was not caught on the filters but passed through and precipitated in the mains, giving a murky water. Since the alum was of good quality a defect in the filter plant was made apparent. This defect cannot be completely eradicated at Haileybury without adding sufficient lime to neutralize the acid, and in order to do this it will be necessary to provide a mixing chamber so that the lime and alum will have about 11 minutes reaction before passing to the filters. In this way a clearer water will be produced free from corrosive action.

Smooth Rock Falls is a town without municipal organization situated at the Mattagami Pulp & Paper Company's plant on the Mattagami River three miles north of Jacksonboro which is on the Transcontinental Railway. The town obtains its water supply from the Mattagami River which is polluted by the large number of camps which are on its banks. Most of these camps are used to get out the company's pulpwood. Considerable efforts were made by Mr. White, Inspector, to your Board, and myself to get the subsidiary company which has the contract for getting out the pulpwood to realize its responsibility in this camp pollution. Early in the year promises were made that a thorough cleanup would be instituted and that efficient supervision would be maintained until spring when the dangers already established would be completely removed. The subsidiary company neglected to make good these promises with the result that the water became grossly polluted in the spring at the time of the run-off. The construction company's physician, Dr. Wright, had taken the precaution to chlorinate the water to such good effect that only a few river drivers who were drinking raw water in preference to chlorinated water, which was supplied, developed typhoid. When the construction was complete the chlorination plant went out of commission and the matter was taken up with the parent company to provide this protection. They promised to do so forthwith but after four or five months the year closed without seeing the apparatus installed. I have been assured, however, that the appliance is on order and that it will be installed before spring.

Iroquois Falls is an organized company town, of 2,500 people, owned by the Abitibi Power & Paper Co. I first visited this place on the 3rd of January after having received several complaints. The condition of affairs discovered

upon that visit was one that endangered the lives of all those who depended upon the Abitibi River as a water supply. Not the least surprising is the fact that this company, whose interests lay in the health of its employees, particularly valuable because of the isolated location of the place and the difficulty of getting people in there, should hazard the vigour of the men negligently, unadvisedly if not selfishly. Within the town 350 men were housed in camps on the banks of a ravine which discharged its drainage above the intake pipe. These camps were provided with outside closets so located that the drainage to the ravine would prevent muddy conditions about them in the spring. To make matters worse they were inadequate in size, were full to overflowing, and were so filthy that the more respectable men were satisfied to get within ten or twenty feet of the buildings. It should be noted here that the town sewers and those from the plant discharged their contents into the river, below the intake, without treatment. Since the sanitary condition of bush camps is as a rule much inferior to those located in towns the slightest reflection was enough to suggest an even more deplorable state of affairs in the camps up the river, where over 2,000 men were employed, than those we have just examined. Mr. A. R. White, your Sanitary Inspector who accompanied me on this visit, proceeded up the river immediately to ascertain the facts. His report was so much worse than I had anticipated that I decided to visit them myself. There was abundant evidence that the bowel and bladder discharges of all these men were getting into the river or would get into the river in the spring at the time of the freshet. Drastic action was necessary to protect the lives of those who depended on this for their water supply; the same, to be effective, required to be applied before the thaw. The matter was laid before the Chief Officer who sent Mr. A. V. De Laporte, one of the Departmental engineers, to report on the most advisable solution for the town. It was decided that with a thorough cleanup the up-river camps could be tolerated for the balance of the season after which they would have to be abandoned until re-located. The town camps were ordered removed immediately to a part of the townsite which could provide sewer connection having an outlet below the intake. Upon Mr. De Laporte's recommendation the company were ordered to install a satisfactory pressure filter and an automatic chlorine plant; the same to be installed and operating by the time of the freshet. The company, who now realized the seriousness of its position, carried this work through on schedule time. I am pleased to state that not one case of typhoid developed within the town limits; while in the unorganized village known as the Wye with a population of 500, twenty cases of typhoid developed with seven deaths. The company was also ordered to install a sewerage disposal plant, but although this has not yet been carried out I am informed that the spring of 1918 will see the work begun.

In Parry Sound the severe epidemic which occurred last year was sufficient to get action out of the municipal authorities which no amount of verbal warning was able to obtain. Engineers were employed to draft schemes for securing a water supply free from dangerous pollution. There is reason to hope that one will be found without undue cost.

Cobalt and North Bay sought from the Legislature rights of sanitary control over their respective water supplies. Cobalt was able to make satisfactory arrangements, but North Bay will have to exhaust other means of control before this can be granted. North Bay has not yet seen fit to carry into effect the recommendations of Mr. Dallyn, Provincial Sanitary Engineer, in regard to the changing of intake location and the installation of a chlorine plant.

At Sturgeon Falls, where the Sturgeon River is the source of water supply, many open closets are to be found along its banks within the town above the intake pipe. The Mayor informed us that these had been closed, but upon inspection they were found still in regular use.

Sewers and Privies.

Smooth Rock Falls.—Permission was obtained from the Provincial Board of Health to proceed with the construction of a sewer system. This work was rapidly carried out with the exception of the disposal plant, for which it was reasonable that further time be granted. Unfortunately, it has transpired that the company who owns the townsite has been unable to purchase certain sections of land through which their trunk sewer will have to pass to reach their disposal plant. The fact that the place is unorganized and in unorganized territory adds seriously to the difficulty of obtaining possession of the land through which their trunk sewer must pass. The perplexity is further embarrassed by a settlement for damages which is pending between the two concerns.

North Bay continued their trunk sewer some two blocks farther. This work is necessarily slow as up to the present time most of the sewer has been laid in solid rock. House connections will be provided for from 2,000 to 3,000 people when this artery is complete.

Parry Sound has now a comprehensive scheme to which all new construction will have to conform.

Fort William and Port Arthur.—Privies in the coal dock section of these cities are very poor indeed. This section is principally occupied by foreigners and has an infant mortality of over 18 per cent. in the first year of life. The Boards of Health have made repeated attempts to have by-laws passed so that a uniform basis of action would be established, but their efforts have met with very indifferent results. In Port Arthur during the past year fly-proof closets were installed in a few isolated instances at the order of the Board of Health, but the effort has not been general enough to have any appreciable effect. The Boards of Trade have been showing some interest of late and should they be sustained it will greatly strengthen the hands of the health authorities in securing concerted action. In the whole of Northern Ontario there is no locality where the solution of the unsanitary privy with its concomitant evils offers such great rewards as here.

In Kenora no attempt will be made to solve their sewer and privy difficulties until after the war. Many objectionable features require solution, but since their water supply is apparently but little endangered, the rest must wait.

At the summer resorts of Sans Souci and Copper Head in the Georgian Bay hotels were discharging their sewerage into the lake without treatment. This practice was forbidden before the 1917 season and satisfactory remedies suggested. Sub-surface disposal could be arranged, but all ground used for filters would have to be made. Outside closets were resorted to.

In South Porcupine the cesspool for the Connaught Hotel was broken and began to discharge down the ditches of the streets. It was necessary to take police court proceedings before this was corrected.

Dairies and Milk Supplies.

During the year I made a personal inspection of all dairies and dairy barns where milk is produced for Fort William, Port Arthur, Sault Ste. Marie, Kenora, Timmins and South Porcupine. In Fort William and Sault Ste. Marie I made

reports which I presented to their respective Boards of Health. In the "Soo" eight places were so inferior that I advised that they be closed. While in Fort William I advised that one be cut off. This man lost his license shortly afterward. A very interesting fact was discovered by these inspections which I think is not in accord with the common belief. It was found that the standard of cleanliness for the three cities was very much below that of the three towns; and the management of the dairy barns was distinctly superior in the towns. Bottle sterilizers and pasteurizers gave the cities some advantage, but most of the pasteurization was done to prevent the milk souring and was discontinued during the winter months. Structural conditions were on the average slightly in favor of the towns. The percentage of cream is usually higher in the towns where there is little effort made to standardize. To sum up, the quality of the milk in the three towns was better both in fat and cleanliness than was the city milk.

I regret to say that no attempt has been made by any municipality in the north country to grade the milk or to score the dairies. The National Committee on Milk Standards has given us a reasonable method of grading, while the same may be said of the method of scoring dairies as set out in the report of the Ontario Milk Commission of 1909. If those who are investing their money in equipment—possibly on the advice of the Boards of Health—are not encouraged, and if the health officials continue to act as if these requirements are unnecessary I will venture to say that not many will make the improvements. Grading and scoring will place the dairies in the order of merit and will encourage up-to-date methods. The dirty producer must be torn away from his equality association with up-to-date dairymen and exposed to the public in his true standing. The methods set forth by the official bodies mentioned above are so eminently fair that the public will sanction their use wherever and whenever instituted. I took occasion to strongly urge this matter on the Boards of Health of Sault Ste. Marie and Fort William in my reports.

The increased cost of labour and feed has caused an advance in milk prices. In spite of this, competent help has been almost impossible to get with the result that the standard of milk cleanliness has shown some evidence of dropping.

Concrete and iron construction is becoming more generally used. The advantages to be gained from the standpoint of durability and cleanliness are self-evident. Each new modern building becomes a model for others which stimulates them to improve conditions.

Conclusion.

Many trips were made to remote sections only to find that the cause of complaint had disappeared. At Whitney and St. Charles epidemics had practically died out before complaint was made. At Chelmsford a nuisance was being created by the town dump; a number of animals had to be burned before living conditions were made bearable for those living near. In Sudbury cellar dwellings were ordered closed as unfit for human habitation.

The work has become so extensive and the calls upon my time so numerous that I would respectfully urge the Department to provide me with a Sanitary Inspector, an office and a stenographer. The stenographer would save much valuable time now occupied with the ever increasing mass of correspondence which sometimes accumulates for weeks without answer. An office would also be able to handle the correspondence of Mr. White and the new appointee.

Respectfully submitted,

W. Egerton George,
District Officer of Health.

Report of Sanitary Inspector

From Alex. R. White, Provincial Sanitary Inspector, North Bay, to the Provincial Board of Health for Ontario.

North Bay, Ont., March 30th, 1918.

I have the honour to submit for your consideration my first annual report, covering the year 1917, as your Inspector in Northern Ontario.

In taking over the work of Assistant Sanitary Inspector, occasioned through the serious illness of George E. Young, who had held office under the Board for many years, and of whose death I have been advised before completing this report, it would therefore seem fitting at this time that I should make a few remarks as to the character of the work accomplished, as well as to pay tribute to the sterling qualities of this official as pioneer officer of the Board in Northern Ontario.

Re Death of George E. Young, Late Provincial Sanitary Inspector.

With the date of Mr. Young's appointment I am not conversant, but in travelling anywhere in the North country one cannot fail to be impressed with the great service he has rendered the Province, especially in the field of lumbering, he having entered upon his work among these camps, far from civilization, as it were, and raised them, when they represented practically nothing in a sanitary sense, to their present day status, this has been a man's job, the sanitary supervising of the numerous small towns which spring up like mushrooms almost over night, and the assistance which he so readily gave to struggling municipalities oftentimes in the throes of a serious epidemic of some communicable disease, such service as this has left a lasting impression throughout Northern Ontario.

Mileage Travelled with Expense to the Board.

Taking up office as I did on December 20th, 1916, right in the very midst of the lumbering season, when so much work required to be performed in connection with this industry, much valuable time was lost in familiarizing myself with the character of the work, as well as introducing myself to the various health officers and contracting physicians throughout Districts No. 6 and 7, which comprise what is known as Northern Ontario.

During the year I travelled 18,523 miles, almost entirely in Districts No. 6 and 7, at a total expense to the Department, including railroad fares, of $791.14.

As a large part of my work is in the unorganized sections of the Province, and while there are many towns and villages situated therein, yet much of my time is taken up especially during the winter months in visiting and inspecting the various lumbering and mining camps, both industries being carried on extensively in the northern and western ends of the Province.

Lumbering Statistics.

During the year I have endeavoured to compile statistics showing the number of lumber companies operating in Ontario, together with the number of camps in use, and the approximate number of men employed. The returns supplied by the

various Crown timber agents throughout the Province, together with such information as I have been able to gather in the different centres which I have visited, indicate that during the season of 1917-18 there were 173 companies operating chiefly in such districts as Port Arthur, Sudbury, Parry Sound, Webbwood, Cochrane, Porcupine, New Liskeard, North Bay, Thessalon, Arnprior, Sault Ste. Marie, Peterborough, and Kenora. This number of companies I find give us a total of 500 camps, which employ approximately 17,000 men.

Number of Camp Inspections Made.

During the year I visited and inspected 113 of these camps, 48 of which I gave one visit, 35 two visits, and 30 three visits. Camps at which I made one visit are situated at such places as Osborne, Espanola, Levack, Parry Sound, Kenny's Siding, and Sundridge.

Two visits being made to camps located near such places as Timmins, Foleyet, Jacksonboro, and Iroquois Falls.

Three visits were made to the camps of the Mattagami Pulp & Paper Co., near Smooth Rock Falls on the Mattagami River, therefore taking into consideration the number of extra visits made in connection with follow up work, this would give us a total of 235 visits.

Provisions of Camp Regulations.

The regulations of the Provincial Board provide that employers of labour in the unorganized territory (that is to say, sections of the Province without municipal organization) shall contract with a duly qualified physician for the sanitary supervision of all camps, works, or other industries, and that a copy of the agreement so entered into shall at the time of the making be transmitted to the Department, together with a sketch or plan showing the lay-out of the several buildings, with the drainage marked thereon, as well as answers to the various questions which are to be found on page 27 of these Regulations.

It is further provided that every employer of labour other than a lumber company shall enter into a contract for the medical care of their employees, and in order to so do may deduct from such employee's wages a sum not to exceed $1.00 per month, which must be paid to the physician without rebate or deduction.

Information Received.

Therefore in compliance with the above Regulation, we have secured medical agreements from 100 companies, received 135 camp sketches and general informations, and have also been provided with 117 reports from contracting physicians.

Inspection of Camps of the Abitibi Power & Paper Co., Iroquois Falls.

The two big items dealt with during 1917, under the head of lumber camp inspections, were the adjustment of the camps of the Abitibi Power & Paper Co., of Iroquois Falls, and the camps of the Mattagami Pulp & Paper Co., with headquarters at Smooth Rock Falls.

Early in January it became necessary, through continued complaints being made, to make a thorough inspection of all camps being operated by the Abitibi Power & Paper Co., these being situated on the Abitibi River between the Town of Iroquois Falls and Lake Abitibi, a distance of perhaps thirty-three miles.

Townsite Bunk Houses.

On arriving at Iroquois Falls, January 3rd, accompanied by Dr. George, the District Officer, we visited Dr. Dorsey, the company physician, who provided us with much information as well as a very candid statement as to the condition of the townsite, as well as the camps, which he claimed to be in the most unsanitary condition, but stated that owing to his position with the company there was little he could do to adjust matters, save to advise the management of the state of affairs, and ask for a remedy, which up to the time of our visit had not been forthcoming, as we found several sleep camps, situated near the general offices of the company, in a most unsanitary condition. These camps were situated on the side of a ravine which drained out almost directly over the intake pipe through which all water used in the town was pumped. The outhouses used were in a most deplorable condition; the floors, seats, and the ground in the immediate vicinity were simply covered with human excrement, which owing to the position of these closets would wash down this ravine in the spring and pollute the water supply.

Temporary Cookery Buildings.

The temporary cookery buildings, also situated on the side of a ravine, the drainage, fortunately, however, discharged into the river below the intake. The sides of this gully were simply covered with every possible description of garbage, such as old boots, clothes, rotten meat, vegetables and tin cans, and in point of quantity could rival the nuisance ground of many a large old established town. The conveniences used in the paper mill, which employs several hundred men on each shift, discharged into the river contrary to law. Such was the state of affairs found at the townsite.

Pulp Camps.

After completing my inspection of the townsite, I left on a visit to the bush camps, of which there were twenty-two in number, employing possibly in the aggregate 1,700 men. These camps (with one exception) had all been wrongly located, being much too close to the river, or upon some steep bank with a rapid descent to same, or were located on some small stream in such a manner that no provision could be made to arrest the drainage before reaching the river.

Outhouses.

The closets were of the log type, with a four inch opening between each timber, were badly located, and were mostly full of snow, therefore not in use, the men preferring to deficate wherever the bush afforded a little privacy. The vicinity of the stables had also been used as a convenience.

Disposal of Garbage.

Garbage could be found at the cookery doors or upon the river banks—no provision was made for either hauling to a safe distance or burning.

Water Supply.

The water supply for these camps is taken from the river, and at the time of my visit it could be clearly shown that each camp was polluting the supply of his neighbour; the only factor of safety was that most of the polluting matter was being held in suspension by the frost.

Stables.

The stables in connection with Camp Mustango (Camp 12 and 13), were built in such a position that during high water in spring the floor would be under water. Huge piles of manure were to be found at these stables.

Construction of Buildings.

The construction of the various buildings did not comply with the Regulations, the most objectionable buildings perhaps being the sleep camps. These were badly overcrowded, had little or no ventilation, floors constructed of rough poles squared on the top, and the bunks, instead of being built parallel with the walls, were of the muzzle loading type (that is to say, were built in rows or stalls), were double deckers, with the lower tier resting on the poles which composed the floor. Some hay or straw is thrown over these poles, a blanket is spread over the hay and the bunk is then ready for occupation.

Drainage.

It could readily be seen that the entire drainage from these twenty-two camps would come down the river during the spring freshet. This, coupled with the unsanitary sleep camps on the townsite, which I have previously mentioned as draining into the river near the intake pipe, would, if allowed to remain as they were, create a highly dangerous situation, at least during the spring months.

Order Issued by Board.

In view of the short time at our disposal to effect a complete clean-up, as well as to have a proper filtration and chlorination plant installed at Iroquois Falls as a means of protection to the users of river water, I accompanied Dr. George to Toronto, where we laid the whole matter before Dr. McCullough, who in turn considered the matter so serious as to request the presence of the president of the company at the offices of the Board, in order that he be advised of the seriousness of the situation. A conference with this official resulted in an order being issued by the Board providing that all camps on the river be cleaned up by February 15th, and that after the drive had come out they could not again be occupied until the provisions of the Regulations had been fully met. This order also provided that an adequate water purification plant be installed at Iroquois Falls, and that a thorough clean-up be started at the various cookery buildings, the objectionable sleep camps to be moved to a more suitable location, the ground in the vicinity of all closets to be put into sanitary condition and liberally treated with chloride of lime.

Provision was also made to correct the unlawful discharge from mill closets to the river, and the construction of a sewage disposal plant to be used in connection with the town's sewage system.

I might say the Board's instructions have been partially carried out. The up-river camps, while still far from being perfect, are in a much better condition, and we are hopeful that another year will bring still further progress.

Improvements Accomplished.

The water purification plant was installed within the time set by the Board, and unquestionably was the saving factor, as no cases of typhoid were reported from the townsite due to the use of river water, but in the "Wye Settlement" adjoining, where river water is used untreated, a large number of cases occurred, with several deaths.

The changing of the closets in the mill and the construction of a sewage disposal plant has not yet been attempted, due I understand to the shortage of labour and other causes. I understand an extension of time in this connection has been granted.

Re Camps of the Mattagami Pulp & Paper Co., Smooth Rock Falls.

Inspection during February, 1917, of the camps of the Mattagami Pulp & Paper Co., of Smooth Rock Falls, disclosed a most interesting as well as a serious problem. The woods operations of this company are in the hands of a contractor, who builds his own camps, brings in his own men, and delivers the wood at so much per cord at the river bank. The contractor referred to is from the Province of Quebec and began operating in Ontario in the fall of 1916. Three hundred and fifty men which compose his bush staff were imported from the Lake St. John district of the same province, bringing with them many of the customs of that district which do not seem to fit in with our Ontario laws.

Camps Operated by Contractor.

This contractor operated twenty-six camps during 1917, situated chiefly on the Muskego and Mattagami Rivers south of the townsite of Smooth Rock Falls, where the pulp mill is situated. The methods used in building and operating these camps is, I think, new to Ontario. The custom is to let small tracts of bush to jobbers, who build their own camps—usually a small one-room affair which does duty for cookery, dining room and sleep camp. The stable I found in many cases was attached or lean-to. No closets were provided except in a few isolated cases, where some spruce branches had been stuck in the snow to afford a little privacy. An added feature to this method of operation is, the jobber as a rule brings in his wife and family. In many of these camps could, therefore, be found the sub-contractor, his wife, eight children and from six to fifteen men living in a small one-roomed camp, the cubical air space provided per occupant being as low as 100 cubic feet, and in no case did I find provision made for more than 300 cubic feet.

The camps for the most part were built as close to the river as possible—so close indeed that some had to be abandoned before the spring break-up, the floors being under water.

Notice Served on Contractor.

As may be seen from the foregoing, not one of these camps could possibly comply with our Regulations in any respect, particularly in the matter of location (the most serious matter from a public health view-point), some being scarcely ten feet from the water's edge and very few over fifty feet. Here, then, was a problem—the adjusting and re-establishing of these camps in order that sufficient protection could be given the users of river water at Smooth Rock Falls. Two courses were open to us: Firstly, the camps could be closed up, as they were being operated without the approval of your Inspector, or they could be cleaned up as thoroughly as possible, and closed at the end of the season (two months distant). To close these camps during the lumbering season meant a very serious loss to the contractor, as well as to cause a very considerable shortage of wood at the mill, and in view of this being the company's first season's operation, coupled with the lack of knowledge of Ontario requirements, we decided to try to have a thorough clean-up started of the camps themselves and the immediate vicinity, and to have them kept in sanitary condition until the end of the season, but under no conditions could they be used the next year. A notice was served on the contractor to this end, but although I made two inspections after the service of this notice, I cannot say that my instructions were carried out, although considerable work was done.

Request by Company to Inspect Camps.

Early in November I was requested by the management of this concern to inspect the camps from which the contractor expected to operate during the 1917-18 season, Dr. Wright, the company physician at Smooth Rock, to accompany me and report to the president, who appeared to be anxious to avoid friction with the Board if possible. On this trip we visited fifty-two camps, placed at intervals on the Mattagami River and two small streams between Timmins and Jacksonboro, a distance of possibly seventy-five miles.

The camps visited near Timmins were new and had only been occupied some two months previous to my visit. In these I noted some improvement over those of last year, such as stables had been built at some distance from the main buildings and log closets had been erected in a number of cases, but the location of the camps in general was bad, being much too close to the river. Inspection of the lower end of the Muskego and Mattagami Rivers disclosed the fact that the camps which the previous season were ordered to be closed, were again operating with practically no changes. This I reported to the Department, and the action in this regard will be dealt with in the report for 1918.

Conclusions re Inspection of Lumber Camps.

In order to apply the Regulations governing unorganized territories as well as to devote some time to the formation of sanitary measures in the numerous small towns and villages situated therein, I wish to present certain conclusions which have become apparent during 1917. Firstly, it has been shown we have 173 lumbering companies in the Province, with a total of 500 camps. The number of inspections made during the year was 113, or including the extra visits in connection with follow-up work, a total of 235 visits. It would therefore appear reasonable to say that, at this rate, it will practically take me three years to inspect the number operating this year.

Information to be Filed Earlier.

In the matter of forwarding medical agreements, camp sketches and general information so highly desired by the Board for statistical purposes, it has been customary in the past to accept these when sent, with the result that while most companies begin work in the fall, much of this information only reaches us when the season is so far advanced as to make it of little value, with the result should there be any omissions, or should the location be a dangerous one, we have very little chance to correct matters the same season. Some arrangement must be made to force these companies to file the required information not later than October 31st in each year. The more serious cases can then be dealt with and adjusted before spring.

Forms Should be Provided.

I believe also much valuable time can be saved by providing a draft form of agreement to be used by contracting physicians or companies. A form with the principal points on which we desire information should also be provided. It has been my experience that fifty per cent. of the medical agreements, camp sketches and other information which has passed through my hands had to be returned for alteration or greater detail. This has of course necessitated much unnecessary correspondence and waste of time.

Physicians Should Report More Frequently.

The number of physicians who provide us with a monthly report is very small. I believe an extra effort should be made during 1918 to see that every contracting physician lives up to his agreement and forwards his reports as the law provides, and by having these reports we are able to get a fair idea of many of the camps which we are unable to visit.

Communicable Diseases.

Outbreaks of communicable diseases occurred in the following places and required my personal attention:—

Typhoid Fever.

At the Wye Settlement near Iroquois Falls, and at Deer Lake, near Sundridge.

Diphtheria.

At Kirkland Lake, Moonbeam, Hanmer and Mattice, near Hearst.

Smallpox.

At Warren in the Township of Ratter and Dunnett.

Measles.

At Espanola.

Most of these outbreaks, while serious, did not assume alarming proportions, save possibly the smallpox at Warren and the typhoid at the Wye Settlement. Both epidemics required a large number of visits from Dr. George as well as myself, and

in the case of the first-mentioned disease it became necessary to force the municipality to issue a proclamation providing for the compulsory vaccination of all residents in the two townships, with very satisfactory results.

Re typhoid at the Wye Settlement, there were some twenty cases of this disease and several deaths, which had apparently been contracted by using river water for domestic purposes, which we found was being polluted by a number of camps higher up the stream, and as no other source of supply was available, many of these residents had dug shallow wells which, owing to the impervious nature of the soil (which is clay), had become receptacles for surface water, and as the yards in which these wells were situated were in the most unsanitary condition. the quality of the water can very easily be imagined. Repeated notices served with a view to correcting conditions proved unavailing, your officials were therefore compelled (however unwillingly) to resort to police court proceedings against twenty of the residents, fines being imposed ranging from $5.00 to $20.00 and costs. This procedure, while drastic, quickly brought results, and a number of wells were closed up and a thorough clean-up instituted, but until some arrangement is made with the Town of Iroquois Falls for a supply of filtered water, there will always be the danger of another outbreak, as most of the people still use river water.

During the year I paid a visit to most of the large towns and districts save that of Sault Ste. Marie, but owing to the large number of calls upon my time, coupled iwth the exceedingly heavy office work, I was only able to remain a very short time in each.

All of which is respectfully submitted.

ALEX. R. WHITE,
Provincial Sanitary Inspector.

Report of the Provincial Medical Inspector

DR. R. W. BELL

REPORT *re* NUISANCE AT DOON.

To the Chief Officer of Health, Ontario.

SIR,—Complaint having been made about a nuisance existing at Doon, in the Township of Waterloo, I visited that place with Dr. Thomas, M.O.H., on June 14th instant, and there met the members of the Board of Health and other residents. The trouble I found to arise on Snyder's Creek a few yards above where it enters the Grand River. Here a dam was built sixty or seventy years ago to retain the water to furnish power for a mill, which, however, has been out of existence many years. The retained water covered the low banks of the creek to the extent of eight to ten acres, property now owned by Mr. Jacob Cluthe. Recently Mr. Cluthe opened the dam and drew the water off, leaving these acres uncovered and on which there is a deep deposit of sludge, said to come from the sewage disposal plant at Kitchener, creating a very offensive odor. As this material dried on the surface, hundreds of cracks 12 to 15 inches deep opened up into small sections of 1 to 2 feet across and these again cracked open 2 or 3 inches deep into many smaller sections, giving it a most peculiar appearance. There was little opportunity of it ever drying out to the bottom, which in a good part would be below the creek level and in all cases would absorb and retain much rain water, so keeping up the stench. A large petition signed by residents in the locality was presented to the local Board of Health asking to have the nuisance abated.

The uncovered acres did not seem at all suitable for cultivation and no one knew why Mr. Cluthe had drawn off the water. He had been spoken to about the matter but had declined to close the dam and reflood the pond. I did not see Mr. Cluthe as he was not at home. As the nuisance existed on his property I pointed out how he could be dealt with in the Public Health Act, but we all agreed that before taking any legal action, another effort should be made by the local Board to get him to reflood the pond and keep it covered, as it could be done at little or no expense and seemed to be the only feasible method of abating the nuisance.

I have since learned from Dr. Thomson that Mr. Cluthe has consented to make a slight necessary repair to the dam, reflood the pond and put an end to the nuisance.

R. W. BELL,
Provincial Medical Inspector.

Toronto, June 25th, 1917.

REPORT *re* SUMMER RESORTS.

To Dr. J. W. S. McCullough, Chief Health Officer, Ontario.

SIR,—In the early part of the season of 1917 (July) I visited Lake of Bays to see if instructions previously given *re* protection of drinking water supply at one of the chief resorts had been complied with, as guests had reported nothing done, while the manager had reported all completed. I found neither report correct. The material for completion of work was on hand and had been for at least a year, and only a few hours' work required to do it, so I insisted that all be done within a couple of days or prosecution would follow. Later in August this same resort was again visited and the work found satisfactory. Complaint had, however, been made in the meantime of an unsanitary garbage dump at this resort. The manager assured us (I was then accompanied by Dr. Clinton, District Officer of Health) that there was nothing of the kind, all the garbage being buried daily, but not being satisfied we instituted a search and discovered a few hundred yards from the hotel, among some bushes near the lake shore, the most disgusting and unsanitary garbage dump I had ever seen. The garbage of several weeks, foul smelling and sour, with millions of flies, was there and had never been covered. This of course we had remedied in short order.

In July I also visited Pt. au Baril on Georgian Bay because of complaints *re* pollution from various cottages. Here I found complaints very much exaggerated and no cottages at all, where we had been informed the most serious conditions existed.

Three private cottages were visited and at all conditions were fairly satisfactory. Two fishermen's islands, however, were far from satisfactory and the necessary instructions were given for immediate improvement.

Honey Harbor and Go Home on Georgian Bay were also visited and conditions satisfactory.

Later in the season it was deemed advisable to make a thorough inspection of all resorts on the Muskoka Lakes, Lake of Bays and Sparrow Lake. Dr. Clinton, District Officer of Health, accompanied me on this trip in August, as he had done on my last thorough inspection in 1914. During the seasons 1915 and 1916 one or other of us had made several isolated inspections in these districts.

Between August 9th and 23rd we visited on Lake Muskoka and Indian River 15, Lake Rosseau 20, Lake Joseph 10, Lake of Bays 33, Sparrow Lake 14. We found several places visited three years before, closed (about six or seven), three large resorts burned and not rebuilt, with at least three formerly closed, reopened. The season 1916 had been rather an off year, tourists much reduced in number, but the present year found nearly all resorts full to capacity. Sanitary conditions were fairly satisfactory on the whole, but there were a few exceptions. Many places still lacked screenings of windows, especially of dining-rooms and kitchens, while several screened bedroom windows only.

Flies this season were comparatively few, in fact of so little annoyance that screens, although on hand, were not put in.

The abominable outside pit closets are still in use at several resorts, and even where the flush system exists there is often an outside pit as well. We have resorted to everything but prosecution to have these abolished and have dry earth closets substituted, but while meeting with fair promises for the change, future visits find

the old state of affairs still existing. I think it will be necessary to make an example of some of the persistently negligent delinquents.

Garbage as a rule is well disposed of, either by being fed to animals, buried or burned. A notable and most surprising exception was the case mentioned in the early part of this report. Laundry work is occasionally done on the water bank, but this we have pretty well stopped.

All in all, there is a reasonable desire on the part of most proprietors to conform to our regulations, which are for their own benefit as well as the protection of the general public, but a yearly inspection is certainly necessary in some cases.

Details as to surroundings and sanitary conditions existing at each place visited are in my possession and available for your information if required.

R. W. Bell,

Provincial Inspector of Health.

Toronto, October, 1917.

Report of the Provincial Sanitary Engineer

F. A. DALLYN, B.A.Sc. C.E., (Tor.)

TORONTO, July 8th, 1918.

Chairman and Members of the Provincial Board of Health, Ontario.

GENTLEMEN,—I have the honour to transmit herewith my annual report for the year 1917.

During the year the following certificates have been issued. The extension of water and sewerage works amounted to the sum of $2,880,534.72, made up in the following manner:—

Waterworks extensions	60	certificates	$561,391.65
New waterworks	16	"	987,407.59
Water purification	7	"	275,286.27
Sewer extensions	88	"	671,558.71
New sewerage systems	7	"	153,419.50
Sewage disposal works	8	"	231,471.00
	186		$2,880,534.72

This is an increase over last year and denotes very decided expansion in the smaller centres over the previous year. The improvement is actually greater than it appears, owing to the fact that the extensions to sewerage and waterworks for the City of Toronto only amounted to $82,367.00 and $84,706.59 respectively, as against $574,888.56 and $18,435.22 in 1916, and $927,835.85 and $263,692.27 in 1915. A great deal of the increased expenditure from the outside towns comes from the activities of the Metropolitan district along the Detroit River, and the balance is general activity amongst the smaller towns extending sewerage systems and putting in house connections to sewers.

The Plumbing By-law has been further revised and brought to what appears to be a satisfactory conclusion. The subject is dealt with in some forty-five pages and the material sub-divided into 250 sections. It deals with sanitation in rural sections without sewers, local organization in urban communities, plumbing inspection, details of and minimum requirements for the installation of plumbing, not only in urban centres, but in the province and rural communities generally, and with the standardization of the weight of fittings, drainage pipe, etc., required for and generally used in this class of work.

The amount of labour involved in the regulations respecting sanitation (plumbing, etc.) has been considerable, but it is felt that the advantages will more than counterbalance our effort in the matter. The advantages to be derived from the Regulations are that with the general improvement of property evidenced, not only in urban communities but in rural communities as well, the work of installing sanitary conveniences, of the water carriage type, will be carried on in a sane and proper manner and that this expansion will not be subject to exploitation. Plumbers, after the passing of the Regulations, will not be able to obtain business in competition through the use of inferior materials and inferior workmanship.

either of which are exceedingly expensive in the end and subject the owners to considerable risk for nuisance.

The study of the relation between water supplies and typhoid fever in the Province has been continued, and the provincial situation to-day is in general a most satisfactory one. Chlorination plants are installed in the towns listed in Table No. 1, filtration plants are in use in those municipalities shown in Table No. 2 and Table No. 3 represents towns using water coming from springs and artesian wells and not subject to contamination of moment.

At the present time, before any definite statement may be made of our continued typhoid toll, we require a somewhat more careful compilation by the local boards of case histories. It appears in many municipalities that the typhoid is continued by sporadic outbreaks connected with the distribution of food, milk supplies and ice cream, and is due to a large number of carriers who are in the province as a consequence of outbreaks in other parts of the country, and who survive as a heritage of the high typhoid rate of some ten years ago. Each case of typhoid in the Province should be very carefully traced to its source, and, as far as possible, reported to the Board. In this way it is believed that the number of carriers may be better estimated and some means may be taken later for keeping carriers under surveillance.

It is also suggested that the Medical Officers of Health for those towns which are hospital centres should indicate definitely in their annual returns to the Board the number of cases and deaths from typhoid fever which belong to outside centres, but which were treated locally at the hospital.

The operation of chlorination plants throughout the Province appears to be reasonably well supervised. Considerable improvements have been made during the year and will continue to be made, both in the apparatus for feeding the solution to the water and in the facilities which are being offered municipalities for obtaining supplies of chemicals. A noteworthy effort in this connection is being made by the General Supply Company of Canada, who are maintaining a plentiful supply of liquid chlorine in cylinders at their Ottawa distribution station, from whence it can be very readily expressed to any part of the Province in urgent need.

The result of the Board's publication of the alum requirements of water purification plants in Ontario has been very satisfactory, and municipal contracts have been entered into with manufacturers at very much improved prices and for a quality of material satisfactory for the local needs.

Your engineer has been in attendance at various sittings of the International Joint Commission respecting the pollution of boundary waters, and it appears most probable that joint action on the part of the two Governments will be taken shortly, for the purpose of further protecting boundary waters from undue pollution by the towns draining sewage thereto. The Board may congratulate itself as having encouraged this matter and assisting in the early efforts as it did by offering its personnel in 1913 for the purpose of investigating the extent of pollution of boundary waters.

The urban municipalities are beginning to appreciate more fully the advantages of municipal collection of refuse, garbage and night soil, and there appears to be a general tendency towards the municipality contracting for such services and the costs, for the property benefited, are collected at tax rates. Persistent efforts, both on the part of the Board and our District Officers of Health, to whom no little credit is due, are gradually bringing about a general adoption of that method.

A careful census shows that when the collection is by arrangement between property owners and a collector there always remains a few neglected properties

which act as fly breeding nuisances and which undo the efforts of the adjoining property holders to control this pest. Compulsory municipal collection is the only satisfactory method yet advanced.

During the year your Engineer's staff has been further depleted by the loss of Mr. DeLaporte and Mr. Berry, who have gone overseas with His Majesty's forces.

Visit of Inspection to England.

It is but proper that your Engineer should express his appreciation of the honour of visiting England and Scotland for the purpose of inquiring into and inspecting municipal improvements controlled by the Local Government Boards of England and Scotland. I left Canada December 4th, 1916, and returning left England about March 1st, 1917.

An inquiry was had into the procedure of the Local Government Board, with reference to applications for approval of the local improvements, at present prescribed in the Public Health Act, Ontario, special inquiry being made with reference to applications to sanction the borrowing of money for water supply, waterworks, and for sewerage purposes.

The procedure of the Local Government Board upon receipt of an application is to appoint an inspector, authorize him to hold an inquiry at the municipality making application. Notice of the inquiry and place of meeting is stated in a printed proclamation, prepared by the Local Government Board, which is tacked up at suitable places, where it will attract the notice of those interested in the inquiry. At the inquiry the inspector has the authority to receive the evidence of any persons interested in the matter of the said inquiry.

The inquiries which follow a procedure which is quite old have resulted in considerable benefit, both to the municipalities affected, to the works, and to the Local Government Board itself.

There is claimed a certain advantage, possibly more imaginary than real, in the holding of public inquiries, and it is that the publicity of an inquiry lends itself to a well considered newspaper comment, which theoretically would tend to place the *full facts* of the proposed improvements before the citizens, who, on ultimate analyses, must bear the brunt of the expense, and to a very large extent do away with ill-considered improvements and improvements which are somewhat too far in advance of local requirements. Unfortunately, this has not always been the Board's experience in Ontario and occasionally petty politics introduce a great deal of idle discussion; however, time may teach us better and inquiries might be held after the English fashion and made elastic enough to receive evidence, in addition to that bearing upon the subject matter, with reference to needed improvements in other portions of the municipality; that is, improvements which, in the opinion of the witness, should take precedence over that limited in the inquiry. Generally, the effect of inquiries supplemented by a judicious newspaper publicity, should improve the status of the Board, always bearing in mind the proper calibre of man for inspector, and would tend to restrain speculative expansion, and elevate and popularize news items in connection with municipal improvements.

It is an open question whether for the purpose of the Public Health Act it is necessary to go into the detail of costs and quantities, as is shown by both the forms of the Local Government Board and even those now in use by this Board. The only sound objection that might be raised is that the forms of the Board do not remotely coincide with the manner in which the cost data records are kept by

the municipality, and entail needless duplication. This might be a very proper objection were it not conveniently possible for the municipalities themselves or for the municipal engineers of the Province to meet and agree upon the manner of keeping cost data, which could then be co-related with application forms required by the Board.

The real reason for going into detail in the estimate and plans is that it assures the compilation of complete municipal records—records which, properly taken advantage of, lead to many economies in the municipal administration and in the sub-division and letting of contracts. For of late years there is evidence of a general movement towards the standardization of fittings and material and towards improved methods of construction. This movement is the result from the co-operation of the various municipal improvement societies and engineering bodies devoting time and thought to municipal improvements, waterworks, and other public utilities.

Any requirement of the Board calling for technical information and tending to enhance the public character of the municipal engineer and emphasize his function in protecting public moneys, in letting of contracts (which in Ontario amount to not less than $10,000,000 annually), should result in a very decided improvement of the general tone of public administration, and this has been amply evidenced in the work of the Board during the past five years.

CHLORINATION PLANTS

List of Municipalities in Ontario Using Chlorine to Protect the Water Supply

Name of Municipality	Date Chlorination Was Established	Amount of Water Treated Per 24 Hours 1916	Source of Water Supply and Preliminary Treatment
Amherstburg	Dec., 1912	500,000	Detroit River, None
Belleville	Feb., 1916	1,756,547	Bay of Quinte, None
Brantford	Mar., 1914	2,225,917	Grand River, Partial Filtration
Brockville	.. 1912	2,764,114	St. Lawrence River, none
Chatham	Oct., 1912	884,163	Thames River, Filtered
Cobourg	.. 1917	. . .	Lake Ontario, Filtered
Collingwood	Jan., 1917	793,065	Georgian Bay, None
Dundas	.. 1917	500,000	Dundas Creek, Filtered
Fort Frances	.. 1912	342,460	Rainy River, None
Goderich	.. 1916	. . .	Lake Huron, Twelve Hours' Sedimentation
Grimsby	.. 1916	350,000	Lake Ontario, Approx. Hours' Sedimentation
Haileybury	.. 1914	270,000	Lake Temiskaming, Filtered
Kenora	.. 1912	. . .	Lake of the Woods, None
Kingston	.. 1912	. . .	Lake Ontario, None
Lindsay	.. 1918	. .	Scugog River, Filtered
New Toronto	.. 1915	. . .	Lake Ontario, Filtered
Niagara Falls	.. 1913	3,400,000	Niagara River, None
Niagara-on-the-Lake	.. 1915	150,000	Niagara River, Filtered
Oakville	.. 1914	. . .	Lake Ontario, Several Days' Sedimentation
Orillia	.. 1912	684,152	Lake Couchiching, Filtered
Oshawa	.. 1916	500,000	Lake Ontario, Filtered
Ottawa	.. 1912	20,000,000	Ottawa River, None
Parry Sound	.. 1916	367,123	Georgian Bay, None
Pembroke	.. 1914	. . .	Ottawa River, None
Perth	.. 1915	500,000	Tay River, Filtered
Peterborough	.. 1916	3,021,870	Otonabee River, None
Port Arthur	.. 1913	2,377,800	Thunder Bay, None
Renfrew	.. 1915	. . .	Bonnechere River, Filtered
Sarnia	.. 1912	4,321,250	River St Clair
St. Catharines	.. 1914	2,998,070	Welland Canal, Two Weeks' Storage
St. Thomas	.. 1913	1,841,479	Kettle Creek and Wells, Filtered
Sault Ste. Marie	Aug., 1913	4,000,000	St. Mary's River, None
Smith's Falls	Sept., 1916	500,000	Rideau Canal, None
Strathroy	.. 1916	240,000	Sydenham River, None
Sudbury	.. 1915	. . .	Ramsay Lake, None
Thorold	April, 1915	376,740	Welland Canal, Five Days' Storage
Toronto	April, 1909	50,310,000	Lake Ontario, Filtered
Walkerville	April, 1913	2,500,000	Detroit River, None
Welland	. . .	1,400,000	Welland Canal, None
Weston	.. 1916	. . .	Humber River, Filters
Windsor	Jan., 1913	7,183,267	Detroit River, None

ENGINEERING SERVICE,
Provincial Board of Health of Ontario.

WATER PURIFICATION
ONTARIO

LIST OF MUNICIPAL FILTER PLANTS

Name of Municipality	Source of Supply	Character of Raw Water	Type and Description of Equipment
Arnprior	Madawaska River	Colored, receives agric. drainage.	Pressure Filter, one 8 x 20 horizontal unit.
Chatham	Thames River	Turbid, highly polluted with sewage.	Pressure Filters, settling basin, eight 8 x 20 horizontal units.
Cobourg	Lake Ontario	Periodically turbid, drainage.	Pressure Filters, three 8 x 20 horizontal units.
Dundas	Catchment Area	Colored, receives agric. drainage.	Gravity Type, Rapid Sand, one unit 12 x 10.
Dunnville	Grand River	Turbid, hard, polluted sewage	Pressure Filters, one 8 x 20 horizontal unit.
Haileybury	Lake Temiskaming	Colored, highly polluted sewage.	Pressure Filters, five 8-foot vertical units.
Kitchener	Deep wells, plus catchment area	C. A. receives agric. drainage.	Gravity Type, Rapid Sand, one unit 14 ft. 0 in. dia. for treating spring water.
Lindsay	Scugog River	Colored, receives agric. drainage.	Pressure Filters, five 8 x 18 horizontal units.
New Toronto	Lake Ontario	Periodically turbid, polluted.	Pressure Filters, four 8 x 16 horizontal units.
Niagara-on-the-Lake	Lower Niagara River	Turbid, highly polluted sewage.	Pressure Filters, three 8 x 16 horizontal units.
Orillia	Lake Couchiching	Periodically turbid, minor pollution.	Pressure Filters, five 8 x 18 horizontal units.
Oshawa	Lake Ontario	Periodically turbid, receives sewage and drainage.	Gravity Type, Drifting Sand, four 12 x 12 units.
Perth	Tay River	Colored, turbid, agric. drainage.	Pressure Filters, two 8 x 25 units.
Port Hope	Lake Ontario	Periodically turbid, sewage and drainage.	Slow Sand Filter, area, one-fifth acre.
Renfrew	Bonnechére River	Periodically turbid, colored drainage.	Pressure Filters, four 8 ft. dia. vertical and one 8 x 25 horizontal unit.
St. Thomas	Springs and Creek	High iron content, algæ	Pressure Filters, six 8 x 20 horizontal units.
Stratford	Wells and Avon River	Periodically turbid, drainage.	Pressure Filters, six 8 x 20 horizontal units.
Toronto	Lake Ontario	Periodically turbid, sewage pollution.	Slow Sand, twelve 1/8 acre units and Drifting Sand Filters, 60,000,000 gals. per 24 hours.
Wallaceburg	St. Clair River	Minor sewage pollution.	Pressure Filters, two 8 x 14 horizontal units.
Weston	Humber River	Colored, sewage and drainage	Pressure Filters, three 8 x 20 horizontal units.

PROJECTED PLANTS

Amherstburg	Detroit River	Periodically turbid, highly polluted.	Gravity Type, Rapid Sand.
Hawkesbury	Ottawa River	Colored, highly polluted.	Gravity Type, Rapid Sand.
Ojibway	Detroit River	Periodically turbid, highly polluted.	Gravity Type, Rapid Sand.
Rockland (under construction)	Ottawa River	Colored, highly polluted.	Pressure Type, two 8 x 20 horizontal units.

ENGINEERING SERVICE
PROVINCIAL BOARD OF HEALTH OF ONTARIO

SPRINGS AND ARTESIAN WELLS

ONTARIO

List of Municipalities in Ontario using Well-protected Springs and Artesian Wells as Sources of Municipal Water Supply

Name of Municipality	Population 1916	Quantity of Water Used Per 24 Hours	Per Capita Consptn.	Name of Municipality	Population 1916	Quantity of Water Used Per 24 Hours	Per Capita Consptn.
Alliston	1,366	125,000	73	Mount Forest	1,941	42,000	
Aurora	2,401	120,000	50	New Liskeard	2,041	140,000	68
Aylmer	2,271	150,000	66	Orangeville	2,493	Not known	
Allandale and Barrie	6,453	220,000	34	Palmerston	1,843	300,000	162
Beamsville	1,050	50,000		Paris	4,370	325,000	74
Beeton	641	50,000	70	Parkhill	1,248	9,000	7.2
Bowmanville	3,655	45,000	12	Port Elgin	1,348	30,000	
Bracebridge	2,803	85,200	30	Preston	4,643	200,000	
Brampton	4,041	240,000	59	Ridgetown	2,329	31,000	13
Chesley	1,975	200,000	101	St. Marys	3,958	250,000	63
Clinton	2,177	50,000	24	St. Thomas	17,174	1,753,861	102
Coldwater	579	60,000		Shelburne	1,115	50,000	44
Elmira	2,270	40,000	17	Steelton	5,393	720,000	133
Essex	1,462	65,000	44	Stratford	17,081	1,396,522	81
Fergus	1,772	40,000	22	Stouffville	1,014	60,000	
Galt	11,852	1,000,000	92	Tavistock	1,009	14,000	13 8
Georgetown	1,905	76,000	40	Trenton	5,000	200,000	40
Guelph	16,735	1,900,000	113	Uxbridge	1,765	60,000	
Harriston	1,404	40,000	28	Walkerton	2,995	80,000	
Kitchener	19,266	1,105,526	57	Waterloo	4,956	600,000	121
Leamington	3,364	175,000	52	Wingham	2,444	240,500	98
London	58,055	4,620,000	78	Woodstock	10,084	1,406,456	182
Mitchell	1,687	260,000	154				

ENGINEERING SERVICE,
Provincial Board of Health, Ontario.

APPROVALS ISSUED, 1917

Waterworks Extensions.

Municipality	No. of Certificates issued	Estimated Costs	Municipality	No. of Certificates issued	Estimated Costs
		$ c.			$ c.
Aurora	1	8.000 00	Oshawa	1	5,670 00
Brantford	1	101,700 00	Peterborough	2	18,565 37
Chesley	1	3,000 00	Port Arthur	2	28,619 10
Fort Frances	1	1,518 47	Prescott	1	955 00
Fort William	1	762 68	Preston	2	3,575 90
Galt	2	18,558 53	Renfrew	3	16,733 68
Grimsby	1	9,020 52	St. Marys	1	4,112 00
Hamilton	5	12,834 43	Sandwich	1	1,465 00
Hespeler	1	8,082 03	Smith's Falls	2	2,091 50
Leamington	1	22,752 00	Stratford	1	11,846 10
Leaside	1	3,000 00	Sudbury	4	54,292 73
Lindsay	1	60,000 00	Timmins	1	8,602 00
Massey	1	1,458 90	Toronto	10	84,706 59
Midland	1	1,822 00	Welland	2	1,509 50
New Liskeard	1	6,000 00	Weston	1	2,729 00
New Toronto	5	55,454 74			
Oakville	1	1,953 88		60	561,391 65

New Waterworks.

Cobourg	1	.....	New Toronto	1	29,585 00
Grimsby	1	7,863 27	Ojibway	1	235,000 00
Hamilton (Beach Pumping Station)	1	127,250 00	Port Dover	1	65,000 00
			Sandwich East	4	55,350 39
Military Convalescent Hospitals	2	.....	York Township	4	467,358 93
				16	987,407 59

Water Purification.

Amherstburg	1	80,000 00	Oshawa	1	38,000 00
Lindsay	1	37,126 00	Strathroy	3	25,860 27
Ojibway	1	94,300 00			
				7	275,286 27

SEWERAGE EXTENSIONS.

Municipality	No. of Certificates issued	Estimated Costs	Municipality	No. of Certificates issued	Estimated Costs
		$ c.			$ c.
Belleville	1	1,671 00	Prescott	1	2,868 75
Brampton	1	.....	Preston	2	13,495 13
Brockville	1	12,640 00	Renfrew	2	26,378 80
Chatham	1	8,294 70	St. Catharines	4	156,653 06
Galt	3	5,742 06	Sandwich	4	2,881 41
Goderich	1	2,916 00	Sandwich, East	1	11,837 11
Guelph	1	2,985 05	Sarnia	6	35,788 85
Hamilton	6	78,497 45	Simcoe	1	16,484 62
Kingston	2	877 00	Smith's Falls	10	18,498 55
Kitchener	2	3,019 54	Stratford	2	3,319 35
Lindsay	2	15,880 93	Sudbury	2	1,882 43
London	5	33,106 42	Thorold	1	1,754 00
New Toronto	2	34,755 90	Toronto	2	82,367 25
Niagara Falls	2	6,988 70	Waterloo	2	877 21
North Bay	1	4,916 00	Welland	2	5,424 83
Oshawa	1	1,130 00	Windsor	3	34,498 96
Ottawa	3	16,536 54	Woodstock	1	900 00
Parry Sound	1	.....	York Township	2	2,620 76
Perth	2	1,070 35			
Peterborough	2	22,000 00		88	671,558 71

NEW SEWERAGE SYSTEMS.

Bruce Mines (Sewerage and water for School)	1	3,500 00	Iroquois Falls	1	10,000 00
Campbellford	1	2,308 00	Military Hospital (London)	1	.....
Cornwall Twp. (Lornerville and Gladstone)	2	1,239 50	Ojibway	1	136,372 00
				7	153,419 50

SEWERAGE DISPOSAL WORKS.

Crystal Beach Co	1	10,545 00	Invererie Hotel (Pt. Stanley)	1	.....
Essex Border Utilities Commission	1	210,300 00	Robson Leather Co. (Oshawa)	1	.....
Kitchener	1	8,326 00	Sudbury	1	2,300 00
Pembroke	1	.....			
International Nickel Co. (Pt. Colborne)	1	.....		8	231,471 00

ACTON TANNERY

I have the honour to report that upon request of Dr. Nixon, of the Township of Esquesing, an inspection was made of the Messrs. Beardmore & Co., of Acton, tannery, for the purpose of inquiring into the manner of disposing of their tannery wastes and to determine whether further improvements are necessary.

The waste disposal works were originally constructed upon recommendation of Dr. Bruce, 1891, and since then have been extended from time to time. The present works are of considerable magnitude and well designed for the purpose of disposing of tannery wastes. Certain improvements are, however, immediately advisable: (1) The construction of a large concrete storage tank to replace the existing wooden tank at the pump house; the present wooden tank is in bad state of repair, liable of collapse and permits leakage to the creek.

(2) The overflow to the original beds (really a by-pass to the creek) should be done away with and all water reaching the collecting flume should be stored in the new tank and conveyed, through the use of pumps, to the beds on the higher elevation across the stream, or to the farm, as found necessary.

(3) Spring water which is now drained to the collecting flume, on Sundays, should be intercepted by an overflow at the spring itself and conveyed direct to the stream, and (4) all water circulating through the soak pits, either during the night or on Sundays, should be taken to the pump well and pumped to the upper beds, and under no consideration should this liquor be allowed to find its way either direct to the river or to the old beds, whether it appears clear or not.

(5) In view of the potential danger from infected hides, notices should be posted that workmen must not throw fleshings and material accumulating in the main collecting flume into the creek, especially fleshings and material draining from the soak pits. The present arrangement for cleaning the flume is not very convenient. It is probably owing to this that the workmen tend to throw obstructions into the stream rather than shovel it onto the bank where it gives rise to odours. Such material should be immediately taken to the dump.

I would further suggest that the discharge main of the pump be fitted with a check valve placed between the pump and the gate valve now controlling the discharge, and that the water for priming be connected in the discharge side of the valve. There appears to be no good reason why the pump cannot be operated automatically, using electrical power, and so dispensing with the constant supervision now required for priming the pump.

F. A. Dallyn.

BURLINGTON WATER SUPPLY

Toronto, April 26th, 1917.

Burlington secures its water supply from infiltration galleries located on Burlington Beach, about one-half mile north of the canal into Burlington Bay. There are five galleries. The north well is situated about 100 feet north of the pump house and about the same distance from the lake. This well has a steel casing 36 feet in diameter and is over 20 feet deep. The south well is from 50 to 60 feet south of pump house and 100 feet from the lake. It has a steel casing 24 feet in diameter and is 20 feet deep. The concrete gallery is 30 inches wide and 100 feet long. It is located at the water's edge and is sunk 15 feet deep. The gallery is connected to the south well and augments its flow.

The beach on which the plant is located is a sand bar stretching across the west end of Lake Ontario, shutting off a portion of the lake to form Burlington Bay. This beach is supposed to have been formed by sand washed from the cliffs to the east of Burlington.

As a summer resort the beach is ideal for people of moderate means. Electric car and boat services enable Hamilton business men to spend their evenings with their families on the shore. Many people have taken advantage of the opportunity thus afforded and the beach is closely built up. Most of the houses are cheaply constructed for summer use.

Sanitary conveniences are primitive, none are fly-proof; a by-law requires the use of water-tight containers, but these, however, are not always replaced in a position to ensure the retention of all the excremental matter. Bed-room slops and other liquid wastes are disposed of on or in the sand.

Samples of water secured during the past two years from the town supply of Burlington have shown, intermittently, traces of what appeared to be sewage pollution. In addition the water, at times, was reported to have a most unpleasant flavor. Samples normally carry considerable flocculent matter in suspension, presumably Fe_2OH_3. The chlorine content was also abnormally high.

The investigation, amongst other things, was to determine the source of the high chlorine. Now as the galleries are situated at least half a mile from any established sewage main, it is inconceivable that any contamination of the water should be from other than the lake, the bay, or from the immediate vicinity. The lack of sanitary protection on the beach itself appears to be the most fruitful cause of dangerous contamination, and the examination of a privy located sixty feet north of the north well showed the ground under the container to be covered with fæcal matter. The women in adjacent houses were also observed to dispose of bed-room slops by throwing them onto the sand. These conditions might be said to be quite general in the vicinity of the Burlington water works. Whilst the sanitary survey gave evidence as to the existence of potential contamination, nothing was observed that would account for the intermittent pollution during the winter months, or for the peculiar mineral content of the water. Infiltration systems have, in the past, shown themselves peculiarly susceptible to any contamination in the resource from which they are augmented. Lake Ontario at this point is dangerously contaminated from time to time, therefore, it is quite possible that the contamination is from this source.

Analyses of water samples from the north well, southermost gallery, the lake, together with the lake itself, and the south well showed a wide variation in mineral content:

—	Lake Ontario (near pump station)	S. Gallery	S. Well	N. Well
Total Solids	146	146	209	350.4
Fe_2O_3	0.4	0.4	1.2	5.0
Cl	12.0	18.0	24	80

From this it will be seen that the water in the south gallery was, without doubt, lake water slightly modified by its passage through the sand, and that the two deeper wells situated farther back on the beach were very much more highly mineralized. The wells either were fed partially from spring water, or directly

from the lake, in which case the most plausible explanation of the mineral content probably would be that, during its passage through the sand the water becomes charged with soluble mineral matter contained in the sand, the amount of mineral dissolved being in direct proportion with the distance the water had to flow and rate of travel through the sand. Therefore, as the north well and south well are the same distance from the lake, the water flowing to the two should be approximately the same.

The galleries, which drain to the south well, were cut off, and the south well pumped out. A sample secured from the inflowing water was analyzed and compared to the north well:

—	S Well without Gallery	N. Well
Total Solids	383 p.p.m.	350.4
Fe_2O_3	4.1 "	5.0
Cl	71.5 "	80.0

As the mineral content of the water varies considerably, this comparatively close result gives considerable colour to either assumption, but samples of sand secured from lower depths showed no evidence of soluble minerals in any considerable quantity.

A test well was sunk twenty feet deep in a line with the centre of the north well, and ten feet to the north of it:

—	North Well	Test Well 16th	Test Well 17th
Total Solids	350.4	317.8	396.4
Cl	80	13.25	13.75

The high total solids in the test well samples are mostly due to the quantity of sand suspended in the samples. Pumping for half an hour seemed to diminish the quantity of sand in the water by not one iota. It is clear from the chlorine content that the water flowing into the bottom of the north well, 100 feet from the lake, was not the same as that in the sand alongside, as shown by the test well located an equal distance from the lake.

A test well was sunk in the centre of the north well. At five feet a sample of highly mineral water was obtained, which showed that the high mineral content in the town supply was due to the small quantity of the highly mineralized water rising from below into the two main wells. That the flow of mineral water is small can be shown from the dilution with lake water required to give the results obtained in the north well.

—	Lake Ontario (near pump station)	Mineral Water	North Well
Total Solids	146	3808.0	350.4
Fe_2O_3	0.4	190	5
Cl	12	1310	80

At the request of the Board of Health a further test well was driven, and evidence of mineral water below these wells was confirmed, by Mr. Percy Dawson, Superintendent of Waterworks for Burlington. Mr. Dawson, upon sinking a test well fifteen feet deep in the north well, struck a small pocket of natural gas. Time has not lessened the intrusion of mineral water, judging from the records of the past few years, and steps should be taken to seek another source of supply.

It is possible to get water on this shore without contamination by mineral water. This is shown by the fact that the water in the concrete galleries, sunk to a depth of only fifteen feet at the water edge, and also at the well which supplies the residents of Burlington Beach, also sunk to only fifteen feet, show very little variation from the lake:

—	Lake Ontario (near pump station)	Concrete Gallery	B. Beach Well
Total Solids	146	146	214
Fe_2O_3	0.4	0.4	0
Cl	12	18	27

Conclusion.

(1) The Burlington water supply is practically rendered unfit for use as a domestic supply by the presence of mineral water rising from underground sources to the two main wells. If the present system of securing water is to be continued the flow of mineral water from below to the steel wells should be eliminated, and water collected in galleries not lower than fifteen feet below water level.

(2) The Burlington town water supply, in addition, is subject to pollution from sanitary drainage. The pollution is partially caused by lack of proper sanitary conveniences. To safeguard the water supply all cottages within 150 feet of the wells should be removed. *The area so cleared should be adequately fenced and trespassing for any purpose whatsoever absolutely prohibited.* The by-law respecting collection of night soil should be conscientiously enforced by the adjoining municipality.

Chlorination can be resorted to if there should, at any later date, prove to be pollution entering from the lake.

A. V. DeLaporte.

ANALYSIS IN PARTS PER MILLION

—	Lake Ontario, Jan. 1917	Lake Ontario, Nov. 1916	Burlington Bay adjacent to Pump House	South Gallery	South Well	North Well	Burlington Town Tap	Test Well 5' deep in centre of North Well	Test Well and North Well sunk by Mr. Dawson	Test Well 10' North of N. Well, 20' deep, Nov. 16th	Test Well 10' North of N. Well, 20' deep, Nov. 17th	South Well with galleries cut off	North Well pumped to 18" on the gauge	Burlington Bay by the Screw Company	Burlington Beach Water Supply
Total Solids	161	146	210	146	209	350.4	289	3808	3358	317.8	396.4	383	689	904	214
Loss on Ignition	58	5	84.8	47	49	146.4	107.4	984	.....	65.8	63	85	230	209	67
SiO_2	6	10	6	1	4.5	1.6	2.2	368.8	.....	79.2	144.2	3.2	18.2	41	2
Fe_2O_3—Al_2O_3	3	14	7.2	1	4.4	9.6	4.2	244.8	.....	29.2	39.6	4.2	26.6	197	1
Fe_2O_3	0.0	0.4	0.9	0.4	1.2	5	4	190	65	2	10	4.1	15	32	0
CaO	61	50	39.4	16	39	19.6	100.6	722.4	1199	107.8	108.2	129.2	98.2	140	71
Na_2O—K_2O	7.8	7.4	19.2	32.3	38.4	36.17	1.13	56.7	663.0	6	6.65	14.8	22.8	64.6	27.4
MgO	5.06	29.3	21	32	31.7	39.4	15.7	133.3	14.35	12.6	13	29.3	22.5	4.63	4.6
SO_3	8.57	15.09	13.4	6.9	16.06	13.72	5.4	13.4	12.89	10.7	12.07	19.6	31.2	182.4	13.7
Cl	14	12	16	18	24	80	64.3	1310	1022	13.25	13.75	71.5	86.9	55	27

COBALT WATER SUPPLY

Acting on instructions from the Chief Officer of Health for the Province, I made an investigation into the cause and effect of the Private Bill of the Town of Cobalt asking for absolute control over the water-shed of Lake Sasaginaga, Graham Lake, Clear Lake and Pretty Lake I beg to report upon conditions as I found them as follows:

The water rights in this area were as far as can be ascertained, originally obtained by the J. R. Booth Lumber Company by grant from the Crown. This firm constructed a dam at lower end of the lake to regulate the water level and facilitate lumbering operations. McCamus & McKelvee, of New Liskeard, bought from the J. R. Booth Company the rights to this section but it is difficult to ascertain whether this firm have maintained their privileges.

About 1905 or 1906 under the Mining Act and by Provincial Charter certain mining companies operating in the Cobalt District began to take water from Lake Sasaginaga for use in their mills. In 1906 the Buffalo Mining Company ran a small pipe line down through the town to supply water for the citizens of Cobalt. In 1910 the town installed a temporary water system taking the water from Lake Sasaginaga but they had not acquired any rights on this lake. It is estimated that the average consumption for the town during that year would be somewhat less than 100,000 gallons per day. In 1910, the water in Lake Sasaginaga became so low that the mines using water from this lake organized the Mines Water Supply Company which operating under Provincial charter repaired the dam and installed a pump to pump water from Mud Lake into Clear Lake whence it drained into Lake Sasaginaga and maintained the water level in that lake. Each mining company interested in the water supply paid for the water pumped on the basis of the water consumption in the respective mills. In January, 1911, a meeting of the Water Commissioners of Cobalt and the Mines Water Supply Company was held when a verbal agreement was made whereby the Mines Company was to maintain the water level in Lake Sasaginaga. When the agreement was drawn up and signed by Mayor Lang for Cobalt, the Mines Water Supply discovered that they were supposed to maintain the water level constant, no matter how much water the Town of Cobalt took from the lake. The agreement was never signed, the contention of the Mines Water Supply Company being that the verbal agreement was to maintain the water level constant with the quantity of water which Cobalt was then using (100,000 gallons per day) and that the town was to pay for water used in excess of that quantity in the same proportion as the mining companies.

The Cobalt Water Commissioners paid their share amounting to about $200.00 in 1915 and $600.00 in 1916. The amount paid figured up to 15 per cent. of the cost of pumping the water, the percentage each corporation was to pay being decided by an estimate of the water used at the respective mills and in the town by an independent engineer. The town maintains that they should not have had to pay this, that the water in this catchment area belongs by right to the public and that the town is entitled to all the water it needs without having to pay for it. This claim the Mines Water Supply Company admits, but they maintain (1) that the average consumption for the Town of Cobalt per day is greater than the amount of water available; (2) the excess water consumed by the town is being supplied by the company; and (3) that the town should pay for the extra water which they use.

The area of the watershed estimated by the engineer for the Corporation of the Town of Cobalt is 1,046.9 acres. The average precipitation per year for a period of over 20 years is 31.70 inches; this will give an average precipitation of the watershed of 753,233,394.3 gallons. If 50 per cent. is allowed for run-off, evaporation and general loss, the quantity of water available will be 376,616,697.1 gallons per year. The number of gallons used by the Town of Cobalt during 1916 was 427,630,000 or 51,000,000 gallons in excess of the water available.

These figures corroborate the figures obtainable from other sources. In 1914 the Mines Water Supply Company, in order to adjust the amount that each mining company should pay for the cost of pumping, had an independent engineer make an estimate of the quantity of water used by each mine. Mr. Neeland of the firm of Sutcliffe & Neeland made the report. He estimated that the amount of water being pumped from Mud Lake was 1,780 Imperial gallons per minute and the amount of water being used by the mines was 1,585 gallons per minute. His figures for 1914 are accurate enough for present use. He figured that the Buffalo Mining Company used 340 Imperial gallons per minute and the Coniagas 309 Imperial gallons per minute, the Trethewey 336 and the Northern Customs 600 gallons per minute. The Hudson Bay Mining Company which is using water from the lake at the present time was not using water at that time having been closed temporarily; however, from figures available this consumption is estimated at about 100 gallons per minute. The Trethewey mine is partially closed down at present and is using roughly, one-half of the 1914 consumption so that the figures at the time of my visit would be:

Buffalo Mining Company	340	gals. per M.
Coniagas Mining Company	309	" "
Trethewey Mining Company	180	" "
Hudson Bay Mining Company	100	" "
Northern Customs Company	600	" "
Total	1529	" "
Town of Cobalt	1000	" "

so that the Mines Water Supply Company pumps approximately 200 gallons per minute more than the mines are using for about seven months in the year. This gives us 60,000,000 gallons over and above what the mines use. As this figure agrees so closely with the estimated shortage and of the natural water, we can accept the estimated deficit without further data.

If the mines were not allowed any water from Lake Sasaginaga and stopped pumping water to the lake the town would probably have to install pumps to maintain the water level—even with the water retained by the dam—as the lake level in January and February would probably drop so low that it would endanger the supply.

Reference has been made by the Town Water Commissioners to the water level in the lake falling so low, due to the operation of the mines, that it endangered the town supply. This is probably true but only twice in the last three years has the water level fallen below what would be the natural water level in the lake at that period: once in April, 1914, and once in September and early part of October, 1916. These figures were obtained from data submitted by the Town Engineer. At no time in the past three years has the water been more than six inches below the natural water level. The apparent discrepancy between the Town Water Commissioners' claims and my figures is accounted for by the fact that the Town Water Commissioners when installing their pumps made no allow-

ance for the artificial level maintained by a dam, owned, constructed and maintained by the Mines Water Supply Company which raises the water level considerably. If the dam were removed the town would not have more than three feet of water over their suction pipe for a great part of the year. This dam which is owned and maintained by the Mines Water Supply Company, retains 300,000,000 gallons of water that would otherwise be lost in the spring run-off (this figure is obtained by allowing for the fact that the dam will retain four feet of water which would otherwise be lost). This volume of water is 12,000,000 gallons in excess of the consumption of the mines during the period when the Mud Lake pumps are not in operation. This is practically the entire spring run-off and is water that would otherwise run to waste.

The total quantity of water available per annum excluding that retained by the dam and allowing for no loss by evaporation, soakage or seepage is 448,000,000 gallons from precipitation and 538,000,000 gallons from pumpage from Mud Lake, a total of 986,000,000 gallons. Allowance must of course be made for loss by evaporation. Allowing 10 per cent. for loss of water by evaporation we find that the total available water excluding that retained by the dam is 915,000,000 gallons, including that retained by the dam, 1,119,000,000 gallons. The water consumption from the lake is (1) by the mines, 690,000,000 gallons; (2) by the town, 428,000,000 gallons, or in all, 1,118,000,000 gallons.

Water normally available from all sources is from precipitation, 377,000,000, from run-off retained by the dam, 304,000,000 gallons and from pumpage from Mud Lake, 438,000,000 gallons, making a total of 1,119,000,000 gallons. Of this we must credit the Mines Supply Company with what is retained by the dam and with what they pump from Mud Lake or 742,000,000 gallons in all. Of this, the mines use 690,000,000 gallons, leaving over 50,000,000 gallons to the credit of the Mines Water Supply Company, whereas the town, if we allow them the precipitation which is normally available has 377,000,000 gallons and are using 428,000,000 gallons or in other words the town has a shortage of 50,000,000 gallons. This, I think, should be paid for by the town on the basis of the cost of pumpage from Mud Lake, the town being assessed for their share of the cost of the operation of the Mines Water Supply Company.

Another way of looking at this problem is that during the five months when the water courses in the north are frozen up Cobalt uses more water than during the summer months, due to the practice of the citizens running their taps to prevent the pipes from freezing. During this period practically no water except what is stored in the lake is naturally available for the use of the town as the precipitation is lying on the hills and in the valleys in the form of snow and ice, and Cobalt would inevitably face a serious shortage of water were it not for the operations of the Mines Water Supply Company. This being the case, I think the Cobalt Water Commission should be more inclined to come to a harmonious agreement with the Mines Water Supply Company.

Considering these facts there are three things possible: First and most reasonable would be for the Water Commissioners of the Town of Cobalt to enter into agreement with the Mines Water Supply Company and pay the cost of pumping for all water used by the town in excess of the normal available precipitation. Secondly, they could proceed under the Public Utilities Act to acquire by lease or purchase all water rights on the lake, maintain the level themselves and charge the mines for their share of the cost of pumping. Thirdly, they could purchase or secure by Private Bill entire control of the lake, force the mines to secure

their water elsewhere and be the sole users of water from Lake Sasaginaga, storing water behind their own dam and making up any shortage by pumping from Mud Lake.

If the mining companies have any rights on Lake Sasaginaga this would work unnecessary hardship on them. They would have to construct a pipe line from Mud Lake and probably install new pumps. This would mean an expenditure of between fifty and seventy-five thousand dollars.

The powers asked for in Section 6 should not, in my opinion, be vested in the Cobalt Water Commissioners as these men have no sanitary knowledge. But these powers should be given to the Cobalt Board of Health and a competent sanitary inspector appointed to police this district, under direction of Dr. McLaren, Medical Officer of Health for Cobalt. Furthermore, the limits described do not constitute the area that will be necessary for safety if water is pumped from Mud Lake to maintain the water level in Lake Sasaginaga. The catchment area of Sharp and Mud Lakes should be included in the district over which sanitary supervision is provided.

If this is done and the Town of Cobalt enters into an agreement with the Mines Water Supply Company each mine should bear their share of the cost of such supervision and I would suggest that a competent sanitary inspector be appointed to supervise this area under the direction of Dr. McLaren, Medical Officer of Health for the Town of Cobalt, and that the salary of such inspector be paid by the Mines Water Supply Company, the town bearing only such expense as may be incurred by them in using water in excess of that naturally available. This sanitary inspector should be accountable only to the Board of Health of the Town of Cobalt. although his salary be paid by the Mines Water Supply Company. This, I believe, would be the best basis for a working agreement. I am quite satisfied that the Mines Water Supply Company would enter into such an agreement if the town officials could be brought to it.

With regard to the Cobalt Water Commission, the present Commission was organized at a time when the Town of Cobalt could not finance its waterworks. The Town of Cobalt has only one representative, the Mayor, on this Commission, the other two Commissioners being the Reeve of the Township of Coleman and the Manager of the Nipissing Mining Company. As chance would have it, the Reeve of the Township of Coleman is a director of the Nipissing Mining Company, so that the Nipissing Mining Company which has no rights on Lake Sasaginaga has two representatives on the Board of Water Commissioners to the Town's one. This has led to more or less comment by various parties and it is reported that the mining property outside of the town has been supplied with town water for domestic purposes in mains which were laid at the Town's expense, while other parties inside the town limits are quite unable to secure water supply from the town system. This is not as it should be and while the water question in Cobalt is to the fore the question of the representation of the town on the Water Commission should be taken up and the Commission reorganized if necessary.

Summary.

1. There is not enough water available in the watershed of Clear Lake, Pretty Lake, Graham Lake and Lake Sasaginaga to supply the present water consumption of the Corporation of the Town of Cobalt, unless Cobalt acquire the water retained by the mines companies' dam.

2. The town has neglected to acquire under the Public Utilities Act any claim or right to water rights in this area, they being permitted to use this water because the owners either did not know or did not care to enforce their claim.

3. The mining companies which the Private Bill affects are taking water from Lake Sasaginaga under Provincial Charter.

4. The present organization of the Board of Water Commissioners for the Town of Cobalt seems unnecessary and the town should have larger representation.

5. The Board of Water Commissioners do not require the powers of a Local Board of Health. The sanitary supervision necessary should be directly under the Cobalt Board of Health and the Medical Officer of Health of Cobalt.

6. The area described for policing and sanitary control is not in my opinion, large enough to protect the watershed of Sharp Lake and Mud Lake if water from these lakes is to be pumped into Lake Sasaginaga.

Water Available:		
Natural precipitation		377,000,000 gals.
Pumpage by Mines Water Supply Company from Mud Lake		438,000,000 "
Run-off retained by Mines Water Supply Co.'s Dam		304,000,000 "
		1,119,000,000 "
Water Consumption:		
Mine supply		690,000,000 gals.
Town supply		428,000,000 "
		1,118,000,000 "
Water Owing to the Mines:		
Retained by the dam		304,000,000 gals.
By pumpage		438,000,000 "
		742,000,000 "
Mines consumption		690,000,000 "
Mines surplus		52,000,000 "
		742,000,000 "
Water Owing to Town:		
Available precipitation		377,000,000 gals.
Used by town	428,000,000 gals.	
Town's shortage	51,000,000 "	
	377,000,000 "	
Average daily shortage for town		136,000 gals.
Average available for town		1,033,000 "
Average consumption calculated		1,169,000 "
Average consumption by town meter		1,172,000 "

All of which is respectfully submitted.

A. V. De Laporte,

Acting Provincial Sanitary Engineer.

DEPOT HARBOUR WATER SUPPLY

About a year ago the water supply for Depot Harbour was reported as unnecessarily endangered by the railway company maintaining a connection with the water used at the round house and elevator. It was recommended that this connection be discontinued.

On February 7th, 1917, in company with Dr. George, District Officer of Health, I went to Depot Harbour and found that this had not been done.

We also re-inspected a septic tank at Depot Harbour which needs attention badly. The drainage area is not sufficiently under-drained and as a consequence it is water-logged. Water lies on the surface and the effluvia is noticeable at some distance. This matter should be attended to immediately, the septic tank cleaned and put in working order and the drainage area sub-drained.

A. V. DeLaporte.

HAILEYBURY WATER SUPPLY

Toronto, Sept. 6th, 1917.

An investigation was held at Haileybury on Thursday, August 16th, 1917, to consider the matter of corrosion of water pipes in that town.

Various samples of corroded pipe were shown me. one pipe which I brought with me to Toronto was three-quarters of an inch in diameter and galvanized. It had been in service only eighteen months and had corroded so badly that it was filled with pin holes and was partially blocked by the product of corrosion—iron oxide. The extent of corrosion of copper tanks and galvanized pipe shown to me revealed a serious condition of affairs.

Examination of the town water prior to filtration and after filtration showed that improper operation of the filter plant was the major cause of the trouble. The filtered water was very acid, due to carbon dioxide in solution, and unprecipitated sulphate of aluminium.

ANALYSIS OF HAILEYBURY WATER

	Water before treatment	Water after treatment
Bicarbonate alkalinity calculated as calcium carbonate	25 ppm.	5 ppm.
Free carbon dioxide calculated in terms of calcium carbonate	5 ppm.	16.5 ppm.
Mineral acids and sulphates of iron calculated in terms of calcium carbonate	15 ppm.	30.5 ppm.
Total acidity calculated in terms of calcium carbonate	13.3 ppm.	47 ppm.

It is necessary in dealing with a water of this character to add lime to successfully precipitate the coagulant. At least three grains per gallon of lime should be added prior to the addition of the alum solution.

On adding lime with the present equipment some trouble may be experienced with turbidity in the tap water. This will happen whenever the alum does not precipitate completely before filtration. To overcome this difficulty it is advisable to add the alum and lime to the water in the pump well in order to allow time for the complete precipitation of the alum before it reaches the filter.

A. V. DeLaporte.

IROQUOIS FALLS WATER SUPPLY

Toronto, January 25th, 1917.

From personal observation, under date January 25th, 1917, I can corroborate the reports of Dr. George and Mr. White regarding the sanitary condition of Iroquois Falls.

The conditions there fall under six separate headings and will be dealt with under such headings in the order of their importance.

1. Water supply.
2. Bunk houses and privies in town in regard to pollution of river.
3. Sewerage and sewage disposal.
4. The Wye.
5. Garbage.
6. Sulphite and other waste from the mill entering the river.

1. The water from Iroquois Falls is in very bad condition. The Abitibi River is not an ideal source of water for a domestic supply, and the methods of treatment are very inefficient. No approval of this system has been granted and the installation is a direct contravention of Section 89 of the *Public Health Act.*

There are five faults in the purification system, viz.:

(*a*) The intake pipe is located in such a position that the surface drainage from the Wye and from the very unsanitary camps in Iroquois Falls proper, must pass the intake pipe. This is a dangerous condition. In the reorganization of the waterworks the intake pipe should be carried to a point above any possible pollution from these sources.

(*b*) The pressure filter which has been installed is about one-third the capacity necessary. The consequence is that the water is forced through at such a rate that it does not remove any of the turbidity, let alone the bacteria. This defect should be remedied promptly by the addition of more filter units.

(*c*) The chlorine is added in the alum solution. The addition of the chlorine to the water is not at all regular, and added in this manner it tends to prevent the action of the alum. The Company are supposed to be adding chlorine in large excess. If so it should be noticeable at all times. This is not the case. A separate chlorine system should be installed, preferably of the automatic liquid chlorine type.

(*d*) The alum added before filtration is not precipitated. This is due either to the acid quality of the water or to the lack of lime in the water, or both. Experimentation is necessary to find out whether it will be necessary to add lime to the water. This should be done immediately.

(*e*) There is a separate fire system for the Town of Iroquois Falls. This is maintained at, roughly, twenty pounds pressure greater than the domestic supply. The system is connected to the domestic supply, and as the water is untreated a leaky valve might mean serious pollution in the domestic supply. In the reorganization of the waterworks this system should be removed. The Board discountenances any such auxiliary system. It is most dangerous.

2. There are a dozen bunk houses, with most unsanitary privies, located on a hill in the town between two branches of a ravine. This ravine drains into the river at a point somewhat above the intake pipe. The location of these bunk houses is a very bad one. They should be removed to a point where it would be

possible for them to have proper flush closets connecting with the sewers of the town, and where the natural surface drainage will not be to the source of the town water.

(*b*) In addition to the privies at the bunk house there are numerous privies in this section which will drain into the river above the intake pipe. These should all be removed. If conveniences are necessary at these points there are three options for the Company, viz., flush closets connected to the town sewerage system, non-flush chemical closets, and sanitary privies with water-tight bucket containers.

In addition to installing these conveniences it will be necessary for the Company, at all times, to keep them in proper condition. This means in the case of the bucket container a frequent and regular collection of excremental matter, and a satisfactory method of disposal.

After the bunk houses and all the unsanitary privies are removed it will be necessary to have the garbage and other waste matter removed, and to thoroughly clean the sites of the privies, then to disinfect the ground where the privies and garbage have been.

(*c*) The privies located in the mill drain directly into the river. They are in the most unsanitary condition and are a disgrace to the Company maintaining them. Proper sanitary conveniences should be installed and the work undertaken immediately.

3. The Company has installed a sewerage system, without authority from the Provincial Board of Health, despite the fact that they were notified by the Board's officer not to do so. They have no method of sewage disposal, although, Mr. Blanchard, townsite engineer, assured me that one was contemplated. However, before any steps are taken by Iroquois Falls or the Company in installing or extending sewers or sewerage system, or an extension or improvement of their waterworks in any way, they must submit the plans of what they have, and the plans for the future, to the Provincial Board of Health for approval.

The sewage at the present time is being emptied into the Abitibi River. This is a serious menace to the health of any Indians, trappers or prospectors who may be using the river water further down, and proper action should be taken by the Company to treat their sewage.

4. On the spur line connecting from the T. & N. O. to the mill of the Abitibi Power and Paper Company, immediately outside the town limits of Iroquois Falls, an unorganized settlement of about 500 persons has grown up. Most of these people are foreigners and ignorant of the first laws of sanitation. The privies are in an abominable condition and all the wells are seriously polluted. Iroquois Falls, for its own safety, should extend to this section sewerage and water facilities.

The close relation between the Wye and Iroquois Falls makes it impossible for an epidemic to sweep the Wye without affecting Iroquois Falls. The municipality of Iroquois Falls should be urged, for their own safety, to consider the needs of this unorganized section.

5. The garbage of Iroquois Falls is dumped fairly close to the town and a half-hearted attempt is made to burn it, but the success of the combustion is shown by the fact that on the day of my visit there were several hogs feeding upon the burnt garbage. Proper collection of the garbage in Iroquois Falls is essential and its disposal by burning in a proper incinerator is a necessity. This should be started forthwith.

6. Spent sulphide liquors, and other waste from the mill, is emptying into the river. The attention of the Company should be called to the fact that the emptying of these mill wastes into the river is an offence under the Act, and upon further notice being served, in regard to this matter, they will be obliged to discontinue the practice and treat these wastes in a manner subject to the approval of the Provincial Board of Health.

Summary.

Reorganization of the waterworks is necessary with a new intake, new filters, and new chlorine system. This should be complete by the first of April.

There is no excuse for the bunk houses and privies being in their present condition two weeks from the time of notice being served on the Company.

Construction of a sewage disposal plant and an incinerator for the garbage should be started first thing in the spring.

All of which is respectfully submitted.

A. V. DeLaporte.

NATIONAL SERVICE CAMPS FOR WOMEN

Toronto, June 27th, 1917.

Acting in accordance with instructions from the Chief Officer of Health, I visited seven of the National Service Camps for women located at Beamsville, Grimsby, Winona, Bronte, Oakville, Clarkson and Vittoria.

The camp at Beamsville is located in the residence of the late Mr. Denny on the Walker farm. It has been unoccupied for some years. A number of small repairs and improvements were being undertaken at the time of my visit. Water for both washing and drinking is obtained from either of two wells, one located in the cellar and the other to the rear of the woodshed. Both wells are comparatively shallow and in a prolonged spell of dry weather the one under the cellar goes dry. The one by the woodshed having been newly dug it is impossible to say whether it will go dry or not. Samples from both wells show the presence of bacteria of intestinal origin in 25 cc. With eighty people living on the premises the quality will deteriorate and if the summer should prove a dry one it may be necessary to seek other sources of supply.

Several patent privies of an excellent type have been installed and should prove eminently satisfactory. However, there is no means of disposing of garbage and other waste material.

The cots in the main room were arranged rather close together and at right angles to the wall. Care should be taken by those in charge in arranging the beds to allow ample air space for each occupant. A number of the girls will be living in tents. Some tents have been erected but no floors have been installed.

The camp for twenty-five girls at Grimsby is in a large house between one and two miles south of Grimsby on the Hamilton St. Catharines Road. The well is behind the house. The privy, which is of a primitive type, is about 150 feet from the well. The Hamilton and St. Catharines Road, at this point, is almost as closely built upon as a city street. The water secured from the well, therefore, irrespective of what a casual bacterial examination will show, should be regarded with suspicion.

At Winona the workers are living in an old club house. At the time of my visit there were sixty people resident on the premises. All the water was carted in a barrel from the lake. Samples taken from the barrel, as might be expected, showed intestinal organisms in 5 cc. The owner of the house should be made to install a proper pump and should provide some arrangement for the chlorination of the water.

There were eight privies, six with buckets and two without. The bathroom was equipped with a bath, wash basin and flush closet, but these could not be used owing to lack of water. The waste water is disposed of in a septic tank and tile drainage. No means of disposing of garbage had been installed, and although attempts had been made to burn the waste it has been found to be impossible without a proper incinerator. This is likely to cause a serious nuisance.

The girls were comfortably housed, one or two to a room, and everything seemed quite adequate in this respect.

At Bronte twenty-five girls are to live in a house belonging to Commodore Williams, of the Toronto Ferry Company's fleet. The water is secured from a well under the woodshed. The pit privy with five seats is located seventy-five feet from the well. The drain from the kitchen sink empties just outside the house and forms an unsightly and noisome pool. There is no way of disposing of liquid slops or garbage. A sample from the well showed intestinal organisms in 25 cc.

A summer bungalow on the lake shore has been secured at Oakville for the use of the twenty-five girls to be resident there. It is supplied with town water and has a bathroom containing a bath, wash basin and one flush closet. The condition of the Oakville water is not satisfactory, and the workers should be protected against typhoid and paratyphoid.

Mr. Pengelly at Clarkson is to employ twenty-five pickers. He plans to house them in a small frame building near the scene of their work. The nearest water is from a well between two and three hundred yards away. This well consists of four or five lengths of tile pipe sunk into the ground. There is no pump, the water having to be dipped out with a pail. This water, if properly safeguarded, should be perfectly good, but whether the supply would be equal to the demand in case of a dry summer it is impossible to say. The privy is extremely primitive and about one hundred feet from the house.

At Vittoria twenty-five pickers are housed on the Jemmett farm, which is located about one and a half miles west of the town. The water for all purposes is teamed from a farmhouse about half a mile away. Investigation of the well, where it was secured, showed it to be located under a farmhouse occupied by Mr. Bruce Lloyd. A privy, almost as primitive as that supplied for the use of the pickers, is located about seventy-five feet from the well.

NATIONAL SERVICE CAMPS FOR WOMEN.

ANALYSIS OF DRINKING WATER SUPPLIES, JUNE 21ST, 1917.

Where collected from	Bacteria grown in N. Agar + 10.0 Per cubic centimeter		Colon Bacilli					Chlorine in parts per million
	At 18°-22° C 48 hours	At 37°-40° C. 24 hours	0.1 cc.	1 cc.	5 cc.	25 cc.	50 cc.	
Grimsby Tap							—	11
Denny House						+		120
Denny House (outside)						+		1,050
Mrs. Ambrose								12
Winona Country Club								10
Captain William's House						+		100
Oakville							—	15
Pengelly (broken)								
Well under Bruce Lloyd's House	too high	0					+	7
Big Creek on Farm	64	4				+		2
Spring on Farm	too high	120		+				2

Mr. Jemmett purposes housing his workers in tents, which he intends to locate on the bank of a neighbouring creek. They will be supposed to use the water from the creek for washing purposes and for drinking he is to fix up a small spring located on the side of the ravine away from the farmhouse. This should supply a safe drinking water if properly protected. On no account, however, must the spring on the hill below the farmhouse be used. Analyses showed that it contained intestinal bacteria in 1 cc.

RECOMMENDATIONS.

1. Each camp should be equipped with a water cooler. The cooler should be kept filled with water, disinfected according to the instructions contained in the Provincial Board of Health leaflet, entitled, "A Simple Method of Water Purification."

2. Each camp, not equipped with flush closets, should be equipped with a sufficient number of fly-tight privies. These privies should be properly equipped with water-tight buckets, which should be emptied at least once a week, and the night soil disposed of in such a manner that it will not cause a nuisance or endanger the water supply. In places where no tile drainage is available for the disposal of liquid slops, properly covered buckets should be provided and the contents disposed of in the same manner as the night soil. The privy seat and floor should be scrubbed every day with boiling water.

3. Each camp should be equipped with a simple incinerator for the disposal of garbage and other wastes.

4. Each camp should have a laundry tent where the girls can do such washing as they may find necessary.

5. Each camp should have a room or tent equipped with proper washing facilities, and a bath or tub for bathing purposes.

6. Adequate water should be supplied to each camp and in close proximity to the camp. This would necessitate the installation of pumps and pipe lines at Clarkson and Vittoria.

7. Each tent should be equipped with a wooden floor. The fly of the tent should be rolled up every day as is the custom in military camps, and from time to time the floors should be removed and the ground aired.

8. Care should be taken to prevent over-crowding in the dormitories.

Appended is a copy of the bacterial results.

All of which is respectfully submitted.

A. V. DeLaporte.

KINGSVILLE WATER SUPPLY

Toronto, May 3rd, 1917.

Kingsville is situated on the north shore of Lake Erie, about twenty miles east of the Detroit River. It has a population of 1,700. The town is built up with a good class of homes but as there are no sanitary sewers those who have installed modern conveniences have had to build septic tanks or cess pits. Part of the town is underlaid with clay and in this section difficulty was experienced with the various devices used for sewage disposal. This was overcome by privately connecting the overflow from the various tanks to a storm sewer. Some of those who could not conveniently connect to a sewer run the effluents from their tanks into a small creek, which runs through the north and west ends of the town.

A woollen mill is situated on the bank of the creek and all the dye wastes, acid liquor, and soap suds are emptied directly into it. The town's water supply, taken from Lake Erie, is affected by the storm sewer which empties into the lake to the east of the intake, and (2) the creek which empties into the lake about 800 yards west of the intake pipe. The Kingsville water supply, as our analytical data clearly shows, is very seriously and continuously polluted.

In the pumping station two high-pressure duplex pumps are installed. One is rated at 1,368,000 imperial gallons per 24 hours, and the other at 605,000 imperial gallons per 24 hours. These pumps are connected directly to a 10-inch intake, stretching 1,600 feet out in the lake, just west of the piers. The pump house is a one storey, brick building situated on the lake shore at the foot of Lansdowne Avenue. The system is direct pressure in connection with an elevated tank of 34,000 imperial gallons capacity. Sedimentation tanks were being installed at the time of my visit.

Lake Erie, at this point, is very shallow and it does not take much of a sea to make the water turbid for some distance from the shore. This turbidity was the immediate cause for the installation of the sedimentation tanks. It is also not an uncommon thing to get wigglers out of the tap, and taking these facts into consideration, along with the gross pollution of the lake, Kingsville is very much in need of a modern filter plant.

Last year the Fisheries Department established a fish hatchery at Kingsville. This is situated on the lake shore about 100 feet to the east of the creek previously mentioned. To secure water a small well was sunk on the shore. As the amount of water secured was insufficient and had considerable smell, an intake was put about 200 feet into the lake. The conditions of the Kingsville water supply held good here and a good part of the time a very turbid water was secured. Sometime after the plant had been in operation a storm on the lake completely plugged the intake with sand. To keep things going water was taken from the creek, and the dye wastes destroyed a considerable part of the hatch. While it will be possible to

remove the immediate cause of the catastrophe, it is poor practice to use a highly turbid water for this work. By putting an intake at least 2,000 feet out probably the water, in time of storm, would not be as turbid as that secured at 200 feet, but it would be impossible to get a good water all the time without going far beyond that. Therefore, a filter is a necessity if the hatchery is to be operated successfully.

As both the Town of Kingsville and the Fisheries Department will have to filter their water, the logical and economical thing to do would be for them to enter into an agreement and build a filter plant which will supply both their needs.

Kingsville also needs to install a sewer system and some simple method of treatment. Action is being taken to prevent the emptying of sewage into the lake at this point. It would be advisable, therefore, for the town to install some simple method of treatment and to build domestic sewers where necessary. This should help to clean up the creek.

The Brown and Wigle Woollen Mill, which was the immediate source of the trouble at the hatchery, should be forced to take action to prevent their waste entering the creek. Dr. R. W. Bell, Provincial Health Inspector, reported this nuisance on October 10th, 1912, in these terms: "The creek is also constantly polluted from a woollen mill located beside it in the north part of the town, the dye wastes—aniline dyes, with various acids, etc., being regularly discharged into it. The managers of the mill admitted the pollution and defiantly asserted that they would continue to utilize it for their waste dyes, etc., unless the Provincial Board of Health provided other suitable means for their disposal, and if the Board otherwise attempted to interfere they would see to the destruction of the Board."

In addition to the waste, which was entering the creek from the plant at the time of Dr. Bell's inspection, there is now a large quantity of soap solution being emptied daily by this firm into the creek. They have established a public laundry and all the dirty water and soap is disposed of in the creek.

The manager seemed quite willing to do anything within reason to stop this pollution, and I am confident that if a feasible method of disposing of the waste were presented to him he would gladly install it.

Sedimentation in a tank, built to trap the scum as well as the sediment, should render it possible to dispose of the waste in subsoil drains. The acid wastes and soap solution should be allowed to mix in the tank before discharge, as they react to clarify the liquid. As the mill is on low ground it will be necessary to pump the waste to the higher ground behind the mill; this is light sand and will simplify the drainage of the absorption area. An alternative would be, that if the town installs domestic sewers to connect to the town system, let the town treat this waste.

Conclusions.

(1) Kingsville water supply is seriously polluted. Chlorination should be resorted to without delay. Twenty pounds of bleach powder or six pounds of liquid chlorine should be added per million gallons.

(2) Filtration is necessary for both the town water supply and the water supply for the hatchery.

(3) The Fisheries Department should aid the town to install filters and secure in return their water from the town.

(4) Kingsville should install a system of sanitary sewers and some simple method of sewage treatment.

(5) Brown and Wigle should be forced to treat their waste or connect to the town sewers if the town installs a sewage treatment plant.

All of which is respectfully submitted.

A. V. DeLaporte.

KINCARDINE WATER SUPPLY

March 1st, 1917.

Kincardine has a population of 2,300 people. There are no sewers and those citizens who wish to have modern conveniences in their homes are obliged to dispose of the waste water in septic tanks or cess pits. The town is peculiarly located on a ridge which runs between the Penetangore River and Lake Huron. The soil is mostly light sand underlaid with a heavy clay. As the substratum is almost impervious to water, the surface drainage flows along the surface of the clay and comes out along the lake shore. This is particularly true in the vicinity of the pump-house.

There is no local by-law enforced specifying the style or construction of outside closets, and sanitary conditions found throughout the town are disgraceful. A number of the citizens who live along the river dispose of various household wastes by dumping on the river bank. The Penetangore River, which should be a natural beauty spot, has become, on account of these conditions, a nuisance. The sides of the hill are covered with garbage, ashes and manure, and numerous rills with a large content of domestic sewage trickle down the bank.

In addition to the domestic waste emptied into the river the waste from a small packing house and the offal from the fish packing industry are put directly into the river. The river empties into Lake Huron about three-quarters of a mile south of the pump-house.

The Chief Officer of Health wrote to the Town Clerk of Kincardine on September 19th, 1916, in regard to the pollution of the Penetangore River. A letter dated September 23rd was received from the town clerk and in this he said, "the sanitary inspector was instructed to again look into this matter." but beyond this nothing has been accomplished in this regard.

The Kincardine pump-house is located on the lake shore at the north-west corner of Durham and Saugeen Streets. It is a one storey brick structure. There are two compound duplex pumps rated respectively at 1,000,000 gallons and 1,440,000 gallons per 24 hours. The system is direct pressure in connection with a stand pipe of 125,000 imperial gallons capacity. The water is collected in two rows of 12-inch perforated tile pipe, which are laid in sand three feet below and six feet in from the low water line. These pipes drain to a tank 98 x 13 x 10 feet deep which is connected to the pump-house by 16 feet of 10-inch cast iron pipe.

Several artesian wells were sunk in 1916 and water from this source was used, temporarily, last summer. It was discontinued on account of its hardness. Previous to the installation of the collecting pipe in the sand the water was secured from Lake Huron through a 10-inch intake pipe 740 feet long. The water at this point was about 25 feet deep. The water obtained was frequently very turbid, and when the intake finally became blocked during a storm the collecting tile was laid as a substitute. The water from Lake Huron, within a reasonable distance of the pump-house, is unsatisfactory without treatment, because the new sea wall, aided by certain winds, deflects the current from the river so that the flow a great part of the time is past the pump-house, and the lake water near the pump-house is, therefore, always, more or less, seriously polluted. The present source of supply from the tile laid in the sand is of a very dubious character, for the sand is saturated with drainage and surface water from a portion of the town, and is doubtless highly charged with organic matter.

In sinking the artesian wells at seventy feet a small quantity of water of fair quality was obtained, but not sufficient to supply the needs of the town. It was,

therefore decided to go deeper and at something over a hundred feet a bountiful supply of water was obtained. This was used for a short period in the town, but it was so hard that it was found necessary to abandon this supply. As no bacterial examinations were made of the water from these wells it is impossible to give an opinion as to their use as a source of water for domestic purposes, nor is it possible, with the evidence at hand, to say whether the highly mineralized water obtained at depth can be successfully shut off.

In conclusion I would recommend that the Provincial Board of Health of Ontario should take action to ensure that the municipality of the Town of Kincardine should (1) immediately install a chlorination plant, using twenty pounds of bleaching powder or 6.5 pounds of liquid chlorine per million gallons pumped; (2) get a complete report of the water situation from some competent engineer; (3) instruct the sanitary officer to vigorously enforce the sanitary by-laws, or if there are no sanitary by-laws, schedule "B" of the Provincial Health Act, particularly in relation to the pollution of Penetangore River.

All of which is respectfully submitted.

A. V. DeLaporte.

NIAGARA-ON-THE-LAKE FILTER UNITS

Toronto, January 29th, 1917.

On December 11th, 1916, and January 15th, 1917, I conducted some tests of the filter units at Niagara-on-the-Lake. The results obtained were not as satisfactory as I had anticipated, but this is probably due to the fact that the pump well and the intake pipe are so small that the alum added to the pump well has no time to coagulate before filtration. The small volume of water available in the pump well is serious from another standpoint. There is not enough water to keep one pump working at capacity and it is the practice to throttle the pump to meet this condition. What would happen in case of a fire?

The filters themselves are of standard design and although the operation was not as efficient as I expected, they should, with proper coagulation of the alum, fulfil every expectation. The following are the bacterial results obtained:

Bacteria per cc.	Raw	Filter "A"	Filter "B"	Filter "C"	Average Bacterial Removal
37°C.	500	140	36	56	90%
18°—20°C.	900	130	25	22	97%
B. Coli in 100cc.	3,000	54	33	50	98%

(Phelp's Method).

Note.—The bacterial results given are an average for 15 samples, except in the case of Filter "A," when the averages for 25 samples taken two minutes apart, after washing the filter before the efficiency of the filter has been regained. This accounts for the high average of Filter "A."

The figures given are for the average run of the filters. At times the efficiency will be greater and at other times much less, showing the necessity of maintaining a sufficient dose of chlorine for this water. This should be added as constantly as though no filters had been installed. If the town wishes to reduce the amount

of chlorine necessary, they will have to purchase apparatus for the addition of the chlorine solution to the town mains, either by pumping the solution or forcing in chlorine gas. If the chlorine were added subsequent to filtration, the amount necessary to insure the safety of this water supply would possibly be one-third of that now used, but, if they continue the practice of adding the chlorine solution before filtration, they must maintain the present amount of chlorine used.

One other feature of the installation which appeared to me to be very unsatisfactory was the practice of emptying the wash water into an open field adjacent to the pump-house, instead of carrying it back to the river or into the town sewers. At present it pools and forms an unsightly pond, which in summer will give rise to objectionable odours. The town should take immediate steps to install proper intake and pump well, and make arrangements to carry the waste water from the filters either into the town sewers or to some point of the river where it will not interfere with their own intake pipe.

The municipality of Niagara-on-the-Lake are very fortunate in having secured the services of the engineer who is at present in charge of the water supply. He seems thoroughly efficient, willing, and realizes the great responsibility that rests on his shoulders. When any steps are being considered to remedy the defects which are pointed out, Mr. Brown's opinion should be taken into consideration.

Summary.

1. The pump well should be immediately enlarged and a sufficient flow of water ensured to meet the needs of the pumps at all times.
2. The wash water from the filters should be either carried into the town sewers or emptied into the river at a point where it will not interfere with the municipal supply.
3. It would be very desirable for the municipality to install a Venturi meter and apparatus for injecting chlorine or chlorine solution into the water mains following filtration, instead of adding solution before filtration as is at present the practice.

All of which is respectfully submitted.

A. V. DeLaporte.

OAKVILLE

Septic Tanks on Dean's Property.

On January 13th, and in company with Mr. Dean, I went over the septic tanks on Mr. Dean's property and on February 13th I again visited Oakville and inspected these tanks with Dr. Stead, the local Medical Officer of Health, and Mr. McLaren, the Sanitary Inspector.

Complaints were received in June, 1916, regarding an effluvia from the overflow from these tanks. On July 19th a letter was sent to Dr. Stead pointing out how to proceed towards the removal of this nuisance. On October 30th and November 1st, 1916, respectively, Mr. Dallyn, the Provincial Sanitary Engineer, wrote to the Health Officer at Oakville, urging action in regard to this matter. Notice had been served by Dr. Stead sometime in December giving thirty days time to abate this nuisance, but to date nothing has been done.

There are on Mr. Dean's property two septic tanks which drain directly into a creek which is carried in a concrete drain, partially under and partially through, the reservoir from which the town water is pumped. This drain ends on the shore at a point directly in line with the Oakville intake pipe.

In view of the menace to the water supply these septic tanks should be immediately ordered closed, and connection be had with the town sewers which are available at this point.

All of which is respectfully submitted.

A. V. DeLaporte.

LISTOWEL WATER SUPPLY

Toronto, November 14th, 1917.

I beg to advise you that the request of the Town of Listowel for your engineer to look over the waterworks, more especially the pollution of the wells, has been met, a visit being made on November 3rd.

The chief difficulty with reference to remedying the surface drainage lies in the fact that the wells have been bricked up for the last forty feet and the bricks have been set, practically, without mortar. In some of the wells mortar necessary for bonding has been introduced, but generally speaking, the bricks are in no sense laid with full mortar joints.

Seepage from the surface of the ground and from a quicksand strata layer, some twelve feet lower, reaches the wells without difficulty. To remove the menace of cess pools the town is asking the approval of the Board for the construction of a septic tank to receive the drainage of several premises now using cess pits. It is proposed to discharge the effluent of the tank directly into the river.

I would recommend that permission be given to construct this tank, with the proviso that such further chambers be added as will protect against any pollution of the creek. The construction of the additional chambers to be determined after the original tank has been put in operation. The pit privies, now in the area affecting the wells, should be immediately provided with water-tight receptacles and cleaned as required. I think a ten day removal would be satisfactory.

Surface water affecting the reservoirs may be diverted by the construction of some field drains through the area in which the wells are located, the field drains to be connected up and made to discharge directly to the creek.

All of which is respectfully submitted.

F. A. Dallyn.

LONDON SANITARIUM WATER SUPPLY

Acting on instructions from the Chief Officer of Health I visited London on Friday, October 26th, 1917, and went over the proposed water supply of the London Sanitarium with Sir Adam Beck. I made a sanitary survey of the springs with the following results: The springs which are supposed to be fed from a pond some half mile away come out at the foot of a gravel bank. In a direct line between the spring and the pond and about 100 yards from the springs are the new buildings of the London Sanitarium.

The Sanitarium is equipped with modern conveniences and water service. The sewage is carried in tile pipes, with concreted joints, to a septic tank on the gravel bank about 100 yards from the head spring, but below it. The water from the collecting head spring, unfortunately, is carried in a tile pipe, with concreted joints, *under the effluent pipe from the septic tank,* to the pump well.

SPRING WATER, BYRON SANITARIUM

Where collected from	Bacteria grown in N. Agar + 10.0 per cubic centimeter		Colon bacilli					*Colonoid bacilli 20 cc.	Chlorine in parts per million
	At 18°–22°C. 48 hours	At 37°–40°C. 24 hours	0.1 cc.	1 cc.	5 cc.	10 cc.	20 cc.		
Well No. 1, Byron Sanitarium..	.....	1	....	....	....	....	....	.....	5.0
" 2, " " ..	.....	0	....	....	....	....	?	?	4.5
" 3, " " ..	.....	1	....	....	....	....	....	.....	4.0

*Colonoid bacilli are such as belong to the colon group.

Altogether apart from what bacteriological evidence we have it would be very difficult to safeguard the springs once the new buildings are occupied. The strict regulations to prevent the soiling of the ground would prove irksome to the patients, and the enforcement of them, irksome to the hospital authorities. Therefore, while I have no doubt that at the time of my visit any pollution which may have been in the springs was of purely animal origin, I could not recommend these springs as a source of water supply with the buildings so close to them and in the drainage area.

Appended is a bacteriological report of the sample I took.

All of which is respectfully submitted.

A. V. DELAPORTE.

PARRY SOUND CHLORINATION SYSTEM

On Tuesday, February 5th, 1917, in company with Dr. George, District Officer of Health, I went over the chlorination system of the water supply of the Town of Parry Sound. The men in charge had misunderstood directions to a certain extent and instead of using the orifice full bore, had inserted a copper wire, cutting down the flow considerably.

The area of the orifice left is so small that it must, from time to time, be partially plugged with the small scales of calcium salts which are always present in a solution of bleaching powder. The copper wire might be removed and the amount of solution fed increased correspondingly.

Another improvement required is the insertion of a valve between the pipe carrying the orifice and the concrete box in which the head on the orifice is regulated. This would replace the stick with which they plug the orifice at the present time.

Directions to this effect were given to the pump engineer.

All of which is respectfully submitted.

A. V. DELAPORTE.

PORT DOVER SPRINGS

Acting on instructions from the Chief Officer of Health I made a survey of the springs, at Port Dover, which are suggested for use as a source of water supply for the town.

The springs are located about three miles north-west of Port Dover and are outcrops of ground water, augmented by drainage from several hundred acres of farm lands. Bacterial examinations of the water from the springs show the presence of bacteria of intestinal origin at practically every spring. This may be attributed to the fact that the arable land in the immediate vicinity is fertilized with manure and the ground immediately around the spring is tramped by cattle.

The intention of the town authorities is to secure two or three of the springs and enough of the land surrounding the springs to insure their safety. This may be easily done. The land so secured should include all the adjacent area draining to the springs in order that there will be no contamination of the springs by such surface water. The site so secured should be adequately fenced and trespassing for any reason whatsoever prohibited. Suitable precautions must be taken to prevent the creek back-flowing in times of high water. It would be necessary to secure at least from three to five acres, depending on the number of springs acquired.

And it would be better to look to the future and purchase, if possible, the entire valley from its head right to the springs. This area is approximately 150 to 200 acres.

All of which is respectfully submitted.

A. V. DeLaporte.

ROCKLAND WATER SUPPLY

Acting on instructions from the Chief Officer of Health I visited Rockland on May 25th, 1917, and took a number of samples from the Ottawa River, both above the Rockland intake pipe and in its immediate vicinity.

Rockland is situated on the Ottawa River about thirty miles below the City of Ottawa. It has a population of 3,270 people. The waterworks are owned by W. C. Edwards and Company, Limited. The water is secured from the Ottawa River through two intake pipes, one of which, an 8-inch pipe, ends at the face of the dock and just below low water level, and the other, which consists of 200 feet of 10-inch and 100 feet of 8-inch pipe, extends about 10 feet beyond the face of the dock and is about 2 feet below the low water level.

There are two duplex horizontal double acting pumps, which have a respective capacity of 900,000 and 700,000 imperial gallons per twenty-four hours. The system is direct pressure in connection with several elevated tanks of the following dimensions: A stone tank 20 feet x 20 feet x 14 feet, capacity 35,000 gallons and three steel tanks with a total capacity of 5,940 imperial gallons. The water is supposed to be for fire protection only, but about two-thirds of the town is supplied with this water and it is used for domestic purposes. The average daily consumption is about 70,000 imperial gallons.

Samples were taken at the points indicated in the accompanying sketch, two samples being taken at each point, one at the surface and one at a depth of twenty feet, except where the river was less than twenty feet deep, three feet above the bottom. Sample point No. 9 was immediately at the end of the larger intake pipe and the deep sample at that point was taken as close as possible to end of the intake pipe.

Bacterial examination of these samples show a general sewage pollution. The sample points were uniformly distributed across the river. This shows clearly that the river is polluted throughout its width. Conditions about the mouth of the intake are such as to increase the already serious pollution of the water. As mentioned before, the intakes are at the side of the dock. Barges are generally moored here. At the time of my visit a barge belonging to the Ottawa Transportation Company was moored to the dock while loading wooden slabs. There were no conveniences provided on the boat, a bucket was used as a substitute; after use this was emptied over the side of the boat, in the immediate vicinity of the intake pipe. Resident on the barge are seven or eight people, including the captain's family.

The water supplied to Rockland, as shown by the analytical data, is dangerously polluted and chlorination should be immediately resorted to while other means of safety are being devised.

ANALYSIS, THE EXISTING ROCKLAND WATER SUPPLY.

Date	Where collected from	Bacterial Count K. Agar + 10.0		Colon Bacilli					Chlorine in parts per million
		At 18°-22° C. 48 hours	At 37°-40° C. 24 hours	0.1 cc.	1 cc.	5 cc.	25 cc.	50 cc.	
Dec. 22..	Tap	.....	.....	.....	+	+	+	+	2
Dec. 29..	Mrs. Clement's Tap	200	12	.....	+	+	+	+	3
Jan. 2..	Tap	60	20	.....	+	+	+	+	3
Jan. 4..	Tap No. 5	42	10	.....	.....	.....	+	+	3
Jan. 5..	Tap	160	34	.....	+	+	+	+	3
Jan. 12..	Tap	130	15	.....	+	+	+	+	2
Jan. 30..	Tap	.....	.....	.....	+	.....	.....	.....	2

ANALYSIS OF OTTAWA RIVER AND OTHER SOURCES OF WATER SUPPLY FOR ROCKLAND.

Source and location of sample		Bacterial Count K. Agar + 10.0		Colon Bacilli					Chlorine in parts per million
		At 18°-22° C. 48 hours	At 37°-40° C. 24 hours	0.1 cc.	1 cc.	5 cc.	25 cc.	50 cc.	
Locat'n 1	Surface, Ottawa River	30	9	.....	....	....	+	+	....
" 1	Bottom, 7 feet below surface	100	Sp.	.....	....	....	+	+	....
" 2	Surface, Ottawa River	69	13	.....	....	....	+	+	....
" 2	Bottom, 20 feet below surface	80	18	.....	....	+	+	−	....
" 3	Surface, Ottawa River	80	7	.....	....	+	+	−	....
" 3	Bottom, 20 feet below surface	90	5	.....	....	....	+	−	....
" 4	Surface, Ottawa River	34	7	.....	....	....	−	−	..
" 4	Bottom, 20 feet below surface	190	9	.....	....	....	−	+	....
" 5	Surface, Ottawa River	44	21	.....	....	....	+	−	....
" 5	Bottom, 20 feet below surface	120	16	.....	....	+	+	−	....
" 6	Surface, Ottawa River	23	6	.....	....	+	−	−	....
" 6	Bottom, 20 feet below surface	375	15	.....	....	....	+	−	....
" 7	Bottom, near intake	220	Sp.	.....	....	+	−	−	....
" 8	Surface "	300	32	.....	....	+	+	−	....
" 9	Bottom "	160	31	.....	....	+	+	−	....
" 10	Commercial Industrial Co.,	110	20	.....	....	+	+	−	....
" 11	Turner's Spring	112	15	.....	....	....	−	−	....
" 12	Town Tap	120	7	.....	....	+	−	+	....

Dr. Powers, M.O.H. of Rockland, suggested as an alternative to filtering the Ottawa River water, the possibility of using several springs belonging to the Commercial Industrial Company, as a source of supply for the town. A survey of the surrounding area showed that the springs came from fissured limestone rock and were probably ground water draining a large farm area. Within 200 yards of the main spring a small creek which is acting as a farm drain empties into a "sink hole" in the rock and is no doubt the chief source of the main spring.

CONCLUSIONS.

(1) Chlorination apparatus should be immediately installed and 20 pounds of bleaching powder or 6.6 pounds of liquid chlorine should be added to every million gallons of water pumped.

(2) If in the reorganization of the waterworks that is necessary, it is decided to use the Ottawa River as a source of supply, new intakes extending to deep water are necessary.

(3) If Ottawa River is to be used as a source of supply pressure filters should be installed.

(4) The springs controlled by the Commercial Industrial Company are not sufficiently pure to be supplied to the town without treatment.

(5) Only about two-thirds of the town can secure water at the present time. The water mains should be extended to supply water to the lower or south-easterly end of the town—East Rockland.

Appended is a copy of the bacterial findings and a sketch map showing location of the sample points.

All of which is respectfully submitted.

A. V. DeLaporte.

RE STURGEON FALLS PULP WASTE

Toronto, November 26th, 1917.

Dr. J. W. S. McCullough, Chief Officer of Health, Toronto, Ont.

Sir,—Mr. DeLaporte, the Chemist in charge of the Experimental Station, was in Sturgeon Falls on December 2nd, 1915, in reference to the pollution of the river. The situation with reference to the town water supply was extremely precarious. In making his report Mr. DeLaporte dealt with the town water supply rather than with the question of stream pollution by the pulp mill. In his verbal report to me Mr. DeLaporte said that the waste from the pulp mill was being discharged, without treatment, into the river and that it did occasion, at times, serious nuisance.

A sample of the wash liquors was sent to the Experimental Station for analyses and we determined there was 2,000 parts per million of pulp in the wash liquor and its acid content 793 parts per million as H_2SO_4. This represents a pollution which could be considerably modified by the installation of save-alls for pulp, or if the several wet machines were operated using waste water and some sort of coarse pulp made of the fibre which is now discharged into the river.

I believe it is a situation which could be materially improved if the authorities went to the Spanish River Pulp Company and advised them that unless steps were taken they would be proceeded against in the courts.

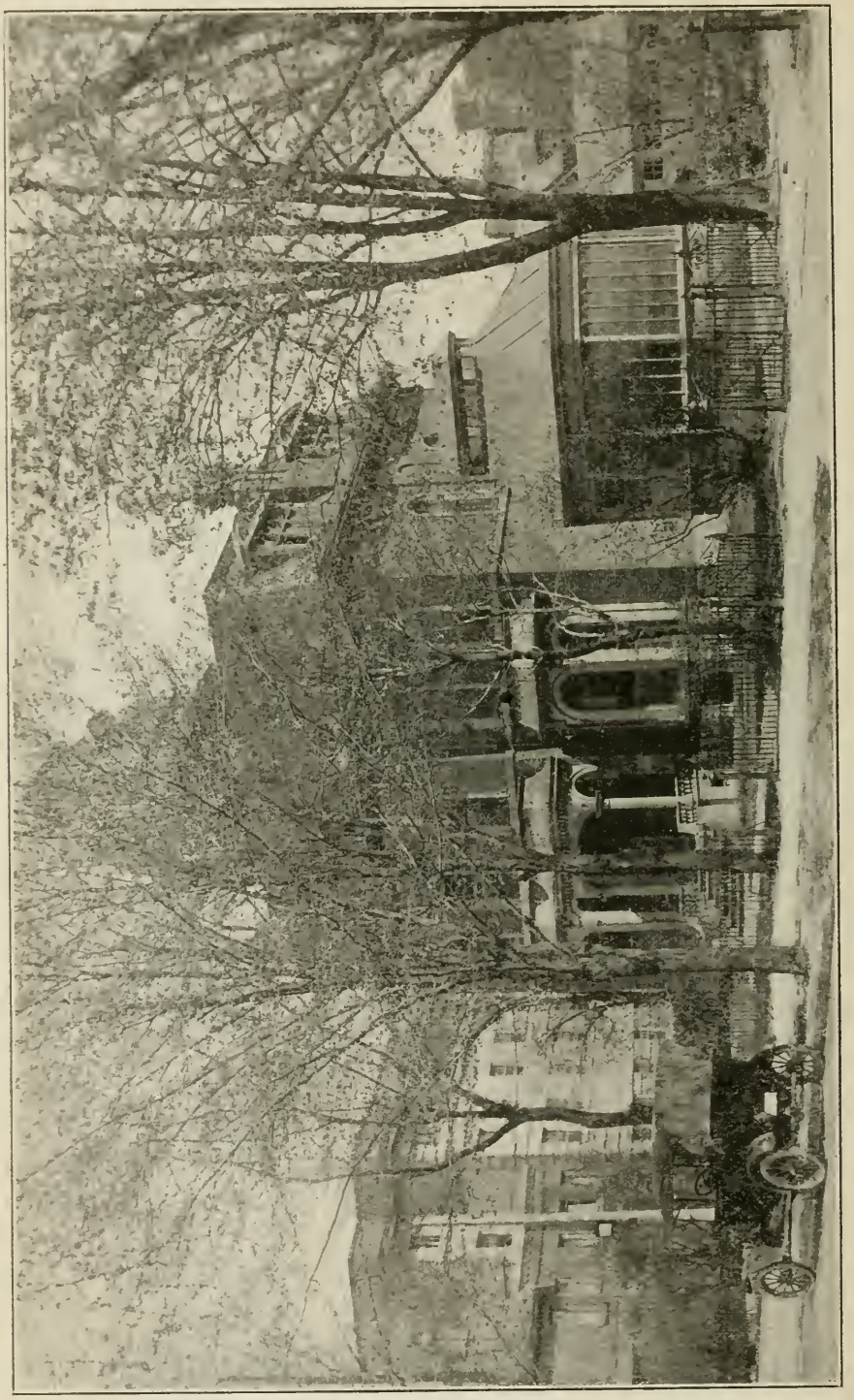
All of which is respectfully submitted.

F. A. Dallyn,

Provincial Sanitary Engineer.

Laboratory Reports for the Year 1917

Laboratories of the Provincial Board of Health, Toronto
Branch Laboratories at Kingston
Branch Laboratories at London (Institute of Public Health)



Main Laboratories, Chemical and Bacteriological, 5 Queen's Park. The Provincial Assay Office is also in this building.

REPORT OF THE LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH, TORONTO

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN.—I have the honour to submit herewith a tabulated statement of the work performed in these laboratories during the year 1917. The number of specimens examined shows a total of 11,755, as follows:

Diphtheria (Swabs)			3,964
Release from Quarantine		1,440	
Positive	412		
Negative	1,028		
Diagnosis		2,524	
Positive	465		
Negative	2,059		
Tuberculosis (Sputum			2,159
Positive	385		
Negative	1,774		
Typhoid (Blood)			835
Positive	214		
Negative	621		
Syphilis			688
Colloidal Gold Reaction		5	
Wassermann Reaction		569	
Very strongly positive	148		
Strongly positive	7		
Postiive	22		
Negative	392		
Treponema Pallida		3	
Positive	...		
Negative	3		
Gonorrhœa		111	
Positive	44		
Negative	67		
Rabies (Brains of Animals)			79
Negri bodies present	34		
Negri bodies absent	45		
Milk			54
Water			2,757
Bacteriological	2,732		
Chemical	25		
Liquor (for License Department)			895
Miscellaneous Specimens (including Coal for Public Institutions)			327
			11,758

Comparison with the reports of previous years shows that this has been the greatest year in the history of the Laboratories.

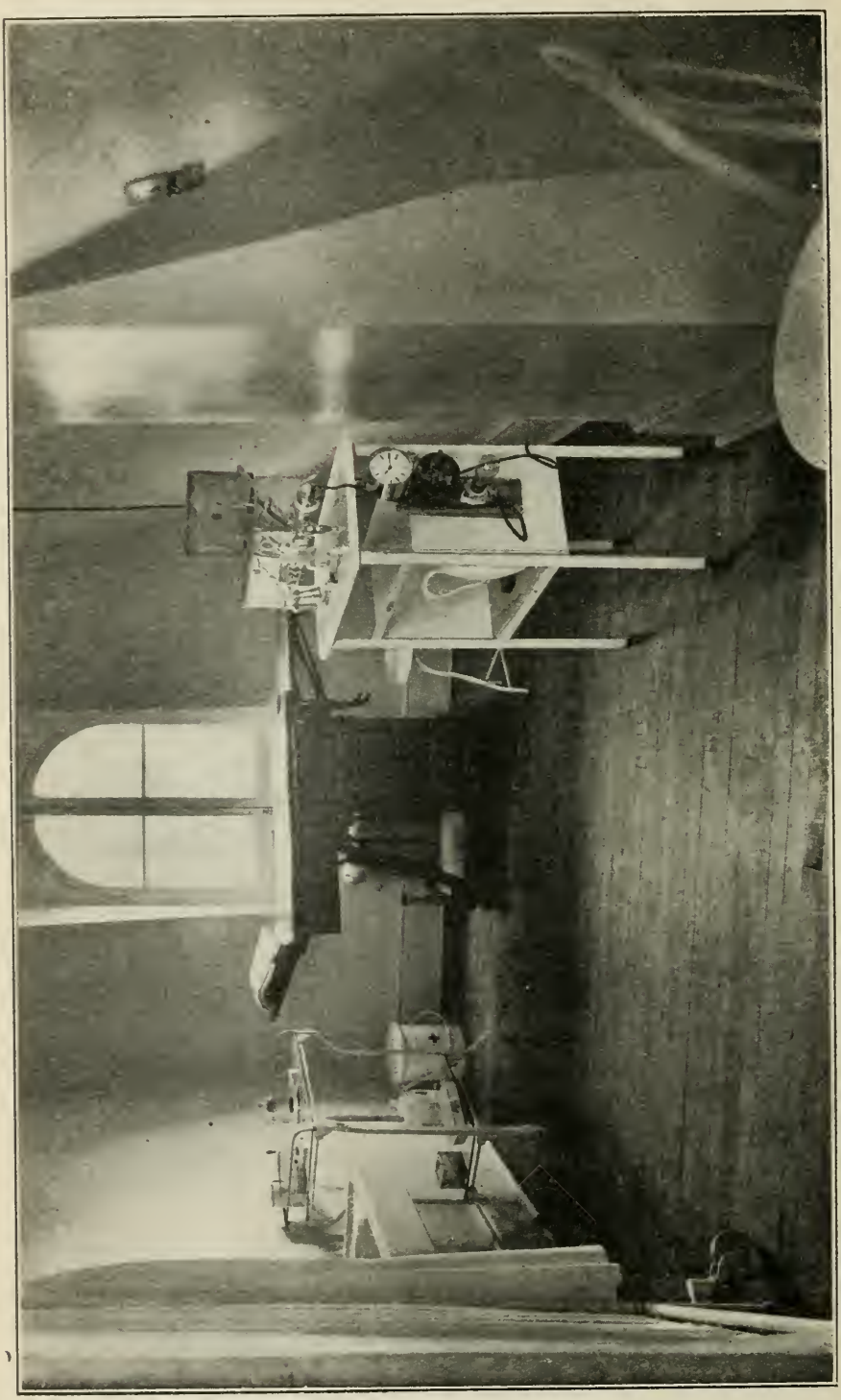
The following is the statement of the amount of Typhoid-Paratyphoid Vaccine supplied to the army, gratis:

Canadian Militia	397,680 doses
Newfoundland	5,250 "

The expansion to include new work in connection with the supply of silver nitrate for the prevention of Ophthalmia Neonatorium, the vaccine for the prevention and cure of Pertussis, and the diagnosis of venereal diseases has made the year a heavy one for the Laboratory staff. We have all done our best to carry on in the absence of Dr. Amyot who is still overseas.

H. M. LANCASTER,
Acting Director of Laboratories.

Laboratories, March 19th, 1918.



Operating Room—Pasteur Treatment.

Patient's Waiting Room—Pasteur Treatment.

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs.				Tubercu-lous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis							Wassermann Reaction				Treponema Pallida.	
	—		—			—		—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive		—		—
Algoma—															
Blind River						1									
Bruce Mines						7	1	5		1					
Crean Hill Mine				1		2	1	3							
Creighton Mine		1	4	15		2		2		6		1	8		
Cutler															
Espanola								1							
Hornepayne															
John Island						2									
Foleyet															
Larchwood															
Levack								1							
Sault Ste Marie	2	6	11	9	7	33									
Spragge				1		1									
Steelton						1									
Thessalon			1												
Webbwood			2	2		1									
Worthington															
Brant—															
Brantford					6	30		2					2		
Burford						1	1	3							
New Durham							1	1							
Oakland					1										
Paris	1	1	3			5									
St. George								2							
Bruce—															
Cargill	3	8	3	6											
Chesley		1		3		3	1	5							
Elmwood				1		8	4	6							
Hepworth						2									
Kincardine						6									
Lucknow					1	3									
Paisley			1			4	1								
Port Elgin		1		1	1	26	1	1							
Ripley		2	1	1	2	5									
Tara						4		2							
Teeswater															
Tiverton				2	1			1							
Walkerton					1	1									
Carleton—															
Ashton					2	4									
Carp	5	22	1	9		3									
Galetta															
Kars			2	1											
Kinburn				1		3									
Manotick				1	1	7		1							
Metcalfe	1		2	4		1		1							
North Gower	2	2	2	1	1	6		2							
Ottawa			1					2		6			6		
Westboro															
Vernon						1									
Dufferin—															
Glen Cross															
Grand Valley						5		1							
Orangeville				1	2	6		3							
Rosemont															
Shelburne			3	4				1							

OF ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED

Gonorrhœa		Rabies Diagnosis				Milk										Waters				
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	Total for Year
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	39
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	9	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	5	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	6	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	13	21	....	102
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	1	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	11	....	....	11
3	1	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	6	84	23	....	157
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	1	....	....	3	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	20
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	3	16
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	19
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	5	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	31
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	1	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	5	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	40
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	3	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	16
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	66	....	....	66
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	....	....	....	1
..	..	cat	....	2	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	1
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction					Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Dundas—																
Chesterville						1										
Morrisburg		1	1	2	1	18	2	4								
Durham—																
Bethany						1		3								
Bowmanville	12	24	7	22	1	10	2	5		2						
Blackstock						2		1								
Enniskillen		1	1	3		6		2								
Fraserville																
Garden Hill		1		1												
Millbrook	1	2	3	2		10	2	3								
Newcastle						1										
Newtonville																
Orono				8	4	5	1									
Pontypool				2		1		1								
Port Hope	7	11	10	14	5	16	2	3		1				1		
Elgin—																
Aylmer																
Dutton																
Port Burwell						2										
Rodney					3	7										
Shedden						1		1								
Staffordville						1										
St. Thomas																
West Lorne																
Essex—																
Amherstburg					1	1	1									
Belle River						3										
Comber					1	5										
Essex				1	2	15										
Ford City	7	9	8	4	1	3		1								
Harrow						1										
Kingsville	5	5	3	6		9										
Leamington							1	2								
McGregor						1										
Ojibway																
Pelee Island																
Ruscomb																
Sandwich		1	2	7			3	3								
Tecumseh	9	32	16	202		4										
Walkerville	6	8	1	16	2	4		1						2		
Windsor	73	176	23	295	11	46	3	14		9				10		
Frontenac—																
Kingston																
Sharbot Lake						1										
Verona						1										
Glengarry—																
Alexandria		1	1	3	5	4	2	1								
Apple Hill			1	4			1									
Dalhousie Mills					3	8	1	3								
Dunvegan					1	4		2								
Martintown				2				1								
Maxville					2	2	1	1								
Williamstown																

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological					Extraneous Matter	Number of Milk Samples					
									Tubercle Bac		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+ —	+	—	+	—	Count			Chemical	Bacterial			
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	30
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	4
1	1	dog	1	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	89
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	14
..	..	dog	....	1	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	2	5
..	..	dog	....	1	....	....	....	.. ..	....	....	....	....	...	....	....	....	3	....	3	30
..	..	dog	....	1	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	dog	....	1	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	6	....	1	25
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	4
..	2	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	72
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	3	....	....	13
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	2	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	13	....	....	16
..	1	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	8	....	26
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	33
..	..	dog	....	1	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	12	....	....	40
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	19	....	....	19
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	1	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	4	....	20
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	263
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	4	....	....	44
1	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	21	1	683
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	1	6	7
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	1	....	18
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	15
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	1	....	8	....	....	15
..	..	....	....	....	....	....	....	.. ..	....	....	....	....	...	....	....	....	4	....	....	4

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction					Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Grenville—																
Cardinal						1										
Kemptville				1	3	9		2								
Merrickville					1			2								
Prescott							1									
Spencerville					1											
Grey—																
Annan		2		3		2										
Ayton																
Bognor						1										
Chatsworth	4	5	1	3	1	1										
Clarksburg		1		1		1	1									
Desboro						1										
Dornoch								2								
Dromore					1	3										
Dundalk					2	4		1								
Durham			1	1	3	4		2								
Flesherton			2	3	2	7										
Hanover								1								
Heathcote						1										
Holstein								1								
Markdale				1	2	8										
Meaford				3		7		3								
Neustadt																
Owen Sound		1		6	3	13	1	5		2						2
Priceville		1		1												
Rocklyn						3										
Thornbury																
Haldimand—																
Canfield																
Cayuga						5		1								
Dunnville				10		11	3	12								
Fisherville																
Hagersville						2										
Jarvis					3	3		1								
Selkirk																
Haliburton—																
Minden		3		1	2											
Halton—																
Acton		2	1	1												
Bronte																
Burlington	4	4	2	3		2										
Freeman																
Georgetown				3		7		1								
Milton			1	1		5				1						
Oakville		2	1	6	1	2	1	8		1		1	6			
Palermo		1	1	1												
Hastings—																
Bancroft																
Belleville					7	11	5	11								
Deseronto				1	2	10		2								
Eldorado				2		2	2	3								
Foxboro				1		6	1	2								
Frankford							2	3								
Madoc				1	1	9		2								
Marmora	3	1	1	3	1	4		2								

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk											Waters				Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological											
										Tubercle Bac		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	1	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	18	....	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	1	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	5	....	2	....	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	1	2
8	8	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	42	2	....	93
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	1	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	6
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	9	....	....	46
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	1	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	10	1	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	1	....	1
..	..	2d'gs	1	1	....	....	....	..	..	....	....	....	....	...	....	....	....	60	....	....	77
..	..	1dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	1	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	1	9
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	8	....	16	....	7	61
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	4
2	2	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	36	....	....	74
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	20	....	....	35

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tubercu-lous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Hastings.—Continued																
Springbrook	....	....	....	2	....	....	1	1	....	....	....	....	....		....	....
Trenton	....	....	....	1	1	4	1	2	....	....	....	....	5		....	....
Tweed	....	....	....	....	....	1	....	....	....	....	....	....	....		....	....
Huron—																
Auburn	....	....	....	....	....	2	....	....	....	....	....	....	....		....	....
Blyth	....	....	....	....	....	1	....	....	....	....	....	....	....		....	....
Brussels	....	....	....	1	....	3	2	1	....	....	....	....	....		....	....
Clinton	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Crediton	....	....	....	....	1	2	....	2	....	....	....	....	....		....	....
Ethel	....	....	....	....	....	2	1	5	....	....	....	....	....		....	....
Exeter	....	....	....	....	2	3	....	....	....	....	....	....	....		....	....
Fordwich	....	....	....	....	....	....	....	2	....	....	....	....	....		....	....
Goderich	....	....	....	....	....	1	2	1	....	....	....	....	....		....	....
Gorrie	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Hensall	....	....	....	....	....	1	....	....	....	....	....	....	....		....	....
Kintail	....	....	....	....	1	....	....	....	....	....	....	....	....		....	....
Seaforth	2	....	1	1	1	3	1	2	....	....	....	....	....		....	....
Wingham	3	4	11	11	....	3	1	3	....	....	....	....	....		....	....
Kenora—																
Keewatin	....	....	....	....	....	4	....	....	....	....	....	....	....		....	....
Kenora	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Sioux Lookout	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Kent—																
Blenheim	....	....	....	....	....	2	....	....	....	....	....	....	....		....	....
Bothwell	....	....	....	....	....	1	....	....	....	....	....	....	....		....	....
Chatham	....	....	2	4	8	31	....	4	....	....	....	....	....		....	....
Dresden	....	....	....	....	1	9	....	....	....	....	....	....	....		....	....
Merlin	....	....	1	4	....	3	....	1	....	....	....	....	2		....	....
Ridgetown	....	....	....	....	....	2	....	....	....	....	....	....	....		....	....
Thamesville	....	....	2	1	1	4	....	....	....	....	....	....	....		....	....
Tilbury	....	....	....	2	1	4	....	....	....	....	....	....	....		....	....
Wallaceburg	....	....	....	....	2	2	....	....	....	....	....	....	....		....	....
Lambton—																
Alvinston	....	....	....	....	1	....	....	....	....	....	....	....	....		....	....
Florence	....	....	....	1	2	1	....	....	....	....	....	....	....		....	....
Forest	12	17	10	3	....	....	....	....	....	....	....	....	....		....	....
Petrolia	....	....	....	....	1	4	....	....	....	....	....	....	....		....	....
Port Lambton	....	....	....	....	....	1	....	....	....	....	....	....	....		....	....
Sarnia	....	....	1	1	2	3	....	1	....	....	....	....	....		....	....
Sombia	....	....	....	1	....	2	1	2	....	....	....	....	....		....	....
Thedford	....	....	....	1	....	2	....	....	....	....	....	....	....		....	....
Watford	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Lanark—																
Almonte	1	1	1	4	3	4	....	....	....	....	....	....	....		....	....
Carleton Place	....	....	....	....	....	2	....	1	....	....	....	....	....		....	....
Lanark	....	....	....	3	....	6	....	3	....	....	....	....	....		....	....
Middleville	....	....	....	....	....	3	....	....	....	....	....	....	....		....	....
Pakenham	....	2	....	....	....	3	....	....	....	....	....	....	....		....	....
Perth	....	....	....	....	3	10	1	1	....	....	....	....	....		....	....
Smith's Falls	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Leeds—																
Brockville	....	2	2	3	....	9	1	1	....	....	....	....	....		....	....
Mallorytown	....	....	....	6	....	1	....	2	....	....	....	....	....		....	....
Lennox & Addington—																
Napanee	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk											Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological											
										Tubercle Bac		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	1	5
1	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	16
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	6	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	1	43
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	1	....	6
..	1	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	36	....	....	85
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	1	....	20	....	....	25
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	1	....	....	....	....	43
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	32	1	1	42
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	10	6	....	19
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	83	....	....	83
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	4	22
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	2	....	4

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tubercu-lous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Treponema Pallida.	
	—		—		—		—		Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Lincoln—															
Beamsville	1	2		4	1	6	1	1							
Grimsby						11		7							
Jordan					3	3	2	2							
Merritton					1										
Niagara-on-the-Lake															
Port Dalhousie					2	2									
Smithville				2											
St. Catharines	3	7	8	9	19	60	1	6		4			5		
St. David's															
Wellandport						5		4							
Manitoulin—															
Gore Bay															
Little Current				2	1	4									
Middlesex—															
Ailsa Craig						4									
Lobo															
London				1											
Parkhill			2	3											
Strathroy					3	6									
Muskoka—															
Bala				1											
Bracebridge		1	1	3		6									
Gravenhurst						1	1			1					
Huntsville			1	3		1		5							
Port Carling				1											
Severn Bridge	2	4		2	2	2	2	1							
Utterson															
Nipissing—															
Algonquin Park															
Bonfield						1									
Boston Creek															
Burwash						4									
Mattawa			1												
North Bay	5	8	10	8	6	11	1	4		1			5		
Sellwood						1									
Sturgeon Falls				1		2									
Whitney						3									
Norfolk—															
Delhi				1	2	18	1	5					1		
Langton						2		2							
Port Dover				1		4		3							
Port Rowan				2		7									
Simcoe				6	5	31		1							
Vittoria															
Waterford				1	1	11	1	2							
Northumberland—															
Brighton	1	3	2	1	1	2	1								
Campbellford					2	1									
Castleton				2		1		1							
Cobourg				2	4	21	1	7							
Colborne				1		1	1	3							
Grafton	2	1	1	1	1										
Warkworth						6		2							
Wooler							1								

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters				Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	7	....	....	23
..	..	2d'gs	1	1	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	22
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	1	1	7	....	....	19
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	....	....	....	....	7	6	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	1	cat	1	....	....	....	....	..	..	....	....	....	....	....	....	....	....	27	28	....	179
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	5	4	18	28
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	22	....	....	32
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	16	....	....	19
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	16
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	71	10	1	141
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
1	4	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
2	2	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	32
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	2	6	....	....	16
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	4	....	3	12	....	62
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	17
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	1	....	....	2	2	40
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction					Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Ontario—																
Beaverton			1			2	2	7								
Brougham			1													
Cannington		1		2		5		4								
Claremont						2		2								
Goodwood							1									
Greenwood																
Myrtle																
Oshawa				3	2	15		3								
Pickering						2		2								
Port Perry				1	3	13		3								
Seagrave						3										
Sebright																
Sunderland						4	1									
Uxbridge			1	3		36		1					1			
Whitby				1	4	5	2									
Oxford—																
Beachville				1	1	3		1								
Bright						2										
Drumbo								1								
Embro						1										
Ingersoll	3	1	3	6	4	17	1	4								
Mount Elgin	1	3	2	1												
Norwich				3		1	1	4								
Otterville						4		1								
Plattsville			1			9		1								
Tavistock				1		5		1								
Thamesford			1													
Tillsonburg				1		8		2								
Woodstock	4	3	4	12	9	28	2	8					1			
Parry Sound—																
Ardbeg					1	3										
Burk's Falls				3		7	2	2								
Byng Inlet						1		1								
Kearney		1						3								
McKellar				1												
Nobel				1		1	1									
Parry Sound	2	4	5	17	7	14	1	8								
Powassan						6		4								
Rosseau																
South River																
Sprucedale					2	5										
Sundridge				1	1		2	1								
Peel—																
Alton	1	4	1			2		2								
Bolton						1	1	2								
Brampton			1			2	1	2								
Burnhamthorpe						2										
Caledon East				3		1		3								
Clarkson	4	3	2													
Cooksville																
Dixie																
Inglewood					1	2										
Lorne Park																
Mono Road								2								

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters				Total for Year
						Food Content		Preservatives		Bacteriological										
			Negri Bodies							Tubercle Bac		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	3	....	....	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	1	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	1	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	1
..	1	....	....	....	....	....	....	..	..	....	....	....	....	...	....	4	....	17	6	7	58
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	7	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	22
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	6	....	....	11
..	2	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	4	....	48
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	12	....	8	32
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	2
1	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	12	....	....	52
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
1	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	3	....	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	2
..	1	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	2	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	8	1	2	82
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	8	....	....	12
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	3	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	18	....	....	76
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	1	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	10
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	6
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	1	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	3	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	9	....	....	18
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	....	4
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	....	3

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction					Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Peel—Continued																
Palgrave				3		1										
Port Credit		2	2	5	3	6		1								
Streetsville			1	1	1	1	1									
Perth—																
Atwood						2		2								
Dublin																
Kirkton		4				4										
Listowel						7	1	1								
Milverton						3										
Mitchell			1		1											
Shakespeare						1										
Sebringville				1												
St. Mary's					1			4								
Stratford				5	6	22		2		2		1	1			
Peterboro—																
Bailieboro		6	1	4	1	4										
Hastings				2	1	6										
Havelock	6	3		2		2										
Keene							3									
Lakefield							1	1								
Norwood				4												
Oak Lake	1	2														
Peterboro	23	37	14	55	10	14	13	21		5			3			1
Prescott—																
Alfred			1			3		1								
Chute à Blondeau					1			2								
Fournier			1													
Hawkesbury			1	2	2	2	3	3								
L'Orignal																
Riceville	2			1												
St. Eugene	3			3		2										
St. Isadore de Prescott				2												
Prince Edward—																
Bloomfield						1		2								
Consecon			1	1												
Picton	1	2	1	6		2		1								
South Bay																
Rainy River—																
Barwick						1										
Fort Frances		1	1	1	1	3	1	1		1			1			
Rainy River						1										
Renfrew—																
Arnprior																
Eganville						9										
Jewellville			1	3		1										
Pembroke			1	3												
Renfrew	2	1			1	6	2	1								
Russell—																
Bourget	13	41	2	6	2	4										
Clarence Creek	2		1	1		1	1									
Navan								1								
Rockland						3										
Russell			1			4										

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	20
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	134	1	....	144
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	1	....	....	1	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	....	....	....	6
..	1	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	2	18	7	....	67
..	..	....	....	1	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	17
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	2	4 d'gs calf	3 1	1	....	....	....	..	..	....	....	....	....	....	....	....	....	10	11	3	227
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
1	2	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	....	20
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	4	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
1	3	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	4	....	21
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	3	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	2	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	73	....	....	77
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	68
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	11	....	....	14
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis							Wassermann Reaction				Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Simcoe—															
Allandale	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....
Alliston	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Angus	....	....	....	....	1	1	....	1	....	....	....	....	....	....	....
Barrie	2	....	1	4	4	16	6	15	....	....	....	....	....	....	....
Camp Borden	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Collingwood	....	....	....	3	....	11	....	....	....	4	....	....	9	....	....
Coldwater	....	....	....	....	1	2	....	1	....	....	....	....	....	....	....
Cookstown	....	3	1	1	....	8	....	2	....	2	....	....	3	....	....
Creemore	....	....	....	....	....	5	2	4	....	....	....	....	....	....	....
Churchill	....	....	....	....	....	3	....	2	....	....	....	....	....	....	....
Edgar	....	1	1	3	....	....	....	1	....	....	....	....	....	....	....
Elmvale	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Hector	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Hillsdale	....	....	....	....	....	....	1	1	....	....	....	....	1	....	....
Lefroy	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Midland	....	....	3	3	2	2	....	....	....	....	....	....	....	....	....
Mattawa	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Orillia	37	69	38	178	6	19	7	17	....	....	....	....	....	....	....
Penetang	....	1	1	9	2	23	1	3	....	....	....	....	....	....	....
Phelpston	....	....	....	2	....	4	....	....	....	....	....	....	....	....	....
Port McNicoll	....	....	....	4	....	1	....	....	....	....	....	....	....	....	....
Stayner	....	....	1	....	....	....	1	2	....	....	....	....	....	....	....
Stroud	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Thornton	....	....	....	....	1	1	....	7	....	....	....	....	....	....	....
Victoria Harbor	....	....	....	7	2	8	2	5	....	....	....	....	....	....	....
Waubaushene	....	....	....	3	1	2	....	1	....	....	....	....	....	....	....
Stormont—															
Aultsville	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
Cornwall	....	....	....	1	1	4	....	....	....	1	....	....	1	....	....
Crysler	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
Mille Roches	....	....	....	....	....	1	1	2	....	....	....	....	....	....	....
Osnabruck Centre	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
Sudbury—															
Chapleau	....	....	....	1	1	2	1	....	....	....	....	....	....	....	....
Chelmsford	....	....	....	....	....	5	....	....	....	....	....	....	....	....	....
Coniston	....	....	....	2	1	6	1	1	....	....	....	....	....	....	....
Copper Cliff	....	....	1	2	....	....	1	3	....	1	....	....	3	....	....
Massey	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Sudbury	....	....	3	2	8	22	2	5	....	2	....	....	2	....	....
Timiskaming—															
Cobalt	....	1	1	7	3	18	....	1	....	4	....	....	5	....	....
Cochrane	....	1	1	2	1	8	4	7	....	....	....	....	....	....	....
Elk Lake	....	....	....	....	1	4	....	....	....	....	....	....	....	....	....
Englehart	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Gowganda	....	....	....	....	....	3	....	3	....	....	....	....	....	....	....
Haileybury	....	....	....	1	4	18	5	7	....	....	....	....	....	....	....
Iroquois Falls	....	....	2	3	2	9	....	....	....	....	....	....	....	....	....
Jacksonboro	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Kirkland Lake	3	7	3	5	....	2	....	....	....	....	....	....	....	....	....
Matheson	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
New Liskeard	....	1	4	11	2	18	....	....	....	....	....	....	....	....	....
Schumacher	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Smooth Rock Falls	....	....	....	....	....	....	2	5	....	....	....	....	....	....	....
South Porcupine	....	....	....	....	....	3	1	....	....	....	....	....	....	....	....
Timmins	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk											Waters				Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological											
										Tubercle Bac		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	....	....	....	....	6	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	4
1	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	16	3	1	69
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	14	....	12	....	5	58
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	22
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	2	....	4	....	....	16
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	....	....	....	....	471	21	70	934
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	2	42
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	3	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	15	....	1	25
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	1	28
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	31	1	1	44
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	11	....	22
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	1	....	....	....	....	....	....	..	..	....	....	....	....	....	....	1	1	170	16	1	236
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	42	6	....	88
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	18	1	....	43
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	5	....	....	11
1	3	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	24	3	....	66
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	78	....	94
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	18	....	....	38
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	1	41
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	12	....	....	19
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	8	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	6	....	....	10

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis							
	Release		Diagnosis							Wassermann Reaction					Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Thunder Bay—																
Fort William	....	....	....	....	....	....	2	6	....	2	....	....	4		....	....
Jellicoe	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Loon Lake	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Port Arthur	1	1	....	2	2	3	....	1	....	....	....	....	....		....	....
Schreiber	....	....	1	4	....	....	....	....	....	....	....	....	....		....	....
Victoria—																
Bobcaygeon	....	....	....	1	....	....	....	....	....	....	....	....	....		....	....
Fenelon Falls	....	....	....	....	....	....	....	2	....	....	....	....	....		....	....
Kinmount	4	3	1	2	1	1	....	1	....	....	....	....	....		....	....
Kirkfield	....	1	....	1	....	1	....	....	....	....	....	....	....		....	....
Lindsay	5	5	7	9	4	17	5	10	....	....	....	....	....		....	....
Little Britain	....	....	....	....	....	5	....	....	....	....	....	....	....		....	....
Oakwood	....	....	....	....	1	2	....	....	....	....	....	....	....		....	....
Omemee	....	3	1	3	2	5	1	1	....	....	....	....	....		....	....
Victoria Road	5	13	1	71	....	....	....	....	....	....	....	....	....		....	....
Woodville	....	....	....	....	2	1	1	2	....	....	....	....	....		....	....
Waterloo—																
Ayr	....	....	....	....	1	3	1	2	....	1	....	....	....		....	....
Elmira	....	....	....	3	....	3	1	2	....	....	....	....	....		....	....
Galt	4	1	6	12	3	30	....	2	....	....	....	1	4		....	....
Hespeler	....	....	....	2	2	1	....	....	....	....	....	....	....		....	....
Kitchener	45	255	28	95	8	37	1	1	....	....	....	....	....		....	....
Linwood	....	....	....	....	1	....	....	....	....	....	....	....	....		....	....
New Dundee	....	....	2	1	....	....	....	....	....	....	....	....	....		....	....
New Hamburg	5	7	2	3	1	9	....	6	....	....	....	....	....		....	....
Preston	....	....	....	....	2	3	2	....	....	....	....	....	....		....	....
Waterloo	3	7	6	4	1	7	2	1	....	....	....	....	....		....	....
Wellesley	....	....	....	....	....	4	....	....	....	....	....	....	....		....	....
Winterbourne	....	....	....	....	....	....	....	1	....	....	....	....	....		....	....
Welland—																
Bridgeburg	....	....	....	2	1	5	....	3	....	....	....	....	....		....	....
Chippawa	....	....	....	....	....	1	1	....	....	....	....	....	....		....	....
Fenwick	....	....	....	....	1	3	3	1	....	....	....	....	....		....	....
Fonthill	....	....	1	1	....	....	....	1	....	1	....	....	1		....	....
Marshville	....	....	1	....	....	....	2	1	....	....	....	....	....		....	....
Niagara Falls	....	....	....	2	1	9	1	3	....	....	....	....	....		....	....
Port Colborne	....	....	....	....	2	3	....	1	....	....	....	....	....		....	....
Port Robinson	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Ridgeway	....	....	....	....	....	4	....	....	....	....	....	....	....		....	....
Thorold	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....
Welland	2	5	4	8	2	3	5	5	....	....	....	....	....		....	....
Wellington—																
Alma	....	....	....	....	....	3	....	2	....	....	....	....	....		....	....
Arthur	....	1	1	....	3	2	....	....	....	....	....	....	....		....	....
Clifford	....	....	....	1	....	....	....	....	....	....	....	....	....		....	....
Drayton	....	1	....	....	10	3	....	15	....	....	....	....	....		....	....
Erin	....	....	....	....	....	5	1	....	....	....	....	....	....		....	....
Elora	....	....	....	....	....	....	1	1	....	....	....	....	....		....	....
Fergus	....	....	....	....	2	2	....	....	....	....	....	....	....		....	....
Glen Allan	....	....	....	....	5	9	....	2	....	....	....	....	....		....	....
Guelph	10	35	11	90	2	8	3	10	....	....	....	....	....		....	....
Harriston	....	....	....	....	1	....	1	2	....	....	....	....	....		....	....
Hillsburg	....	....	....	....	....	3	....	1	....	....	....	....	....		....	....
Moorefield	....	....	....	....	1	1	....	....	....	1	....	....	....		....	....
Morriston	....	....	....	....	....	2	1	1	....	....	....	....	....		....	....

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

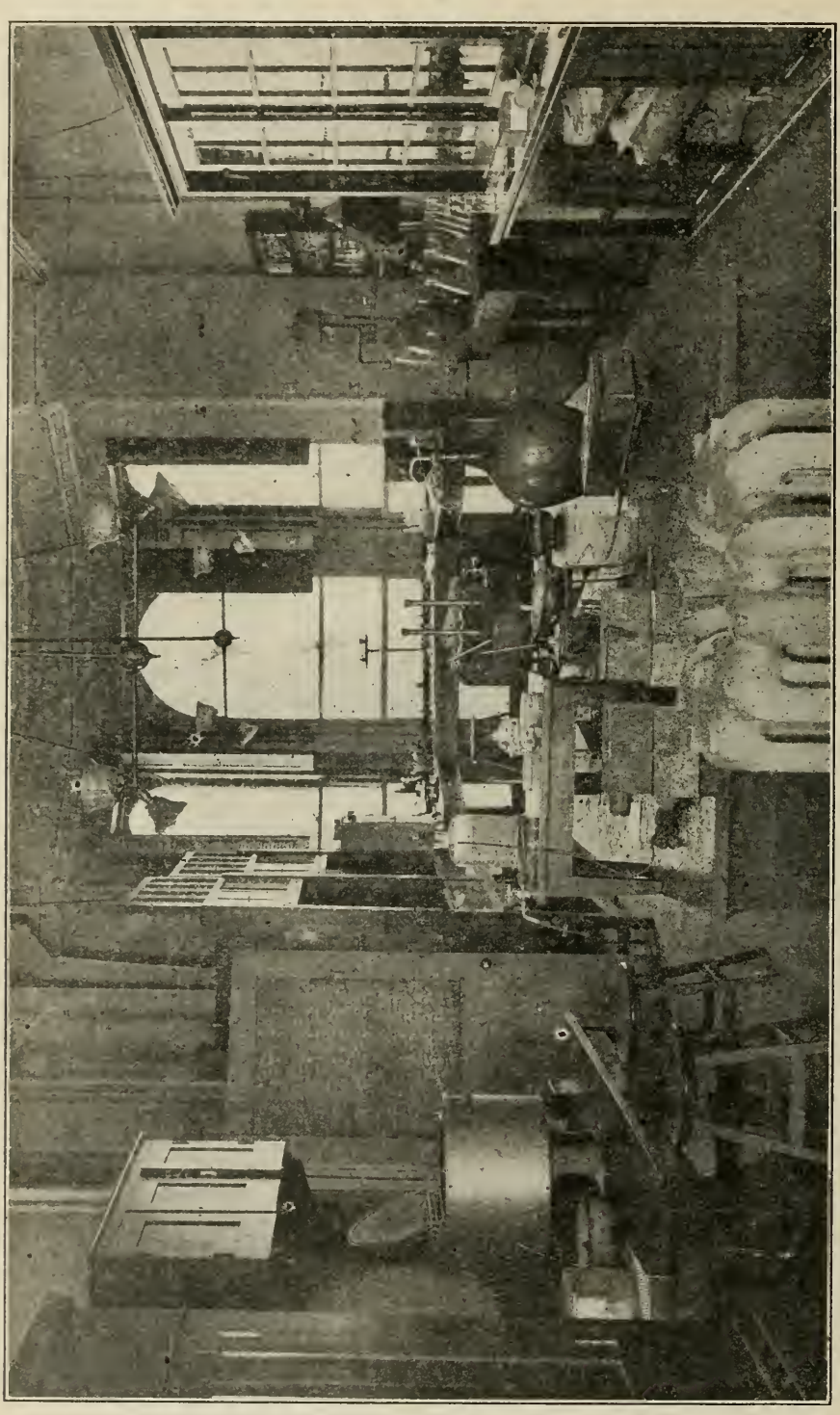
Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
..	3	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	18
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	10
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	2
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	8	....	....	70
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	2d'gs	1	1	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	20
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	90
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	6	....	1	15
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	1	....	64
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	2	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	21	29	....	520
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	3
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	34
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	4	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	6	....	....	37
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	2	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	11
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	11	....	....	13
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	8
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	dog	....	1	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	29	1	....	46
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	1	....	9
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	....	....	....	....	15	1	....	17
1	1	2d'gs	2	....	....	....	....	..	..	....	....	....	....	....	....	....	....	19	33	1	91
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	5
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	1
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	1	....	33
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	1	....	....	7
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	3	....	....	5
..	..	....	....	....	....	?....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	16
..	1	sheep head	....	1	....	....	....	..	..	....	....	....	....	....	....	....	....	56	13	12	252
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	2	....	....	6
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	4
..	..	....	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	4

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

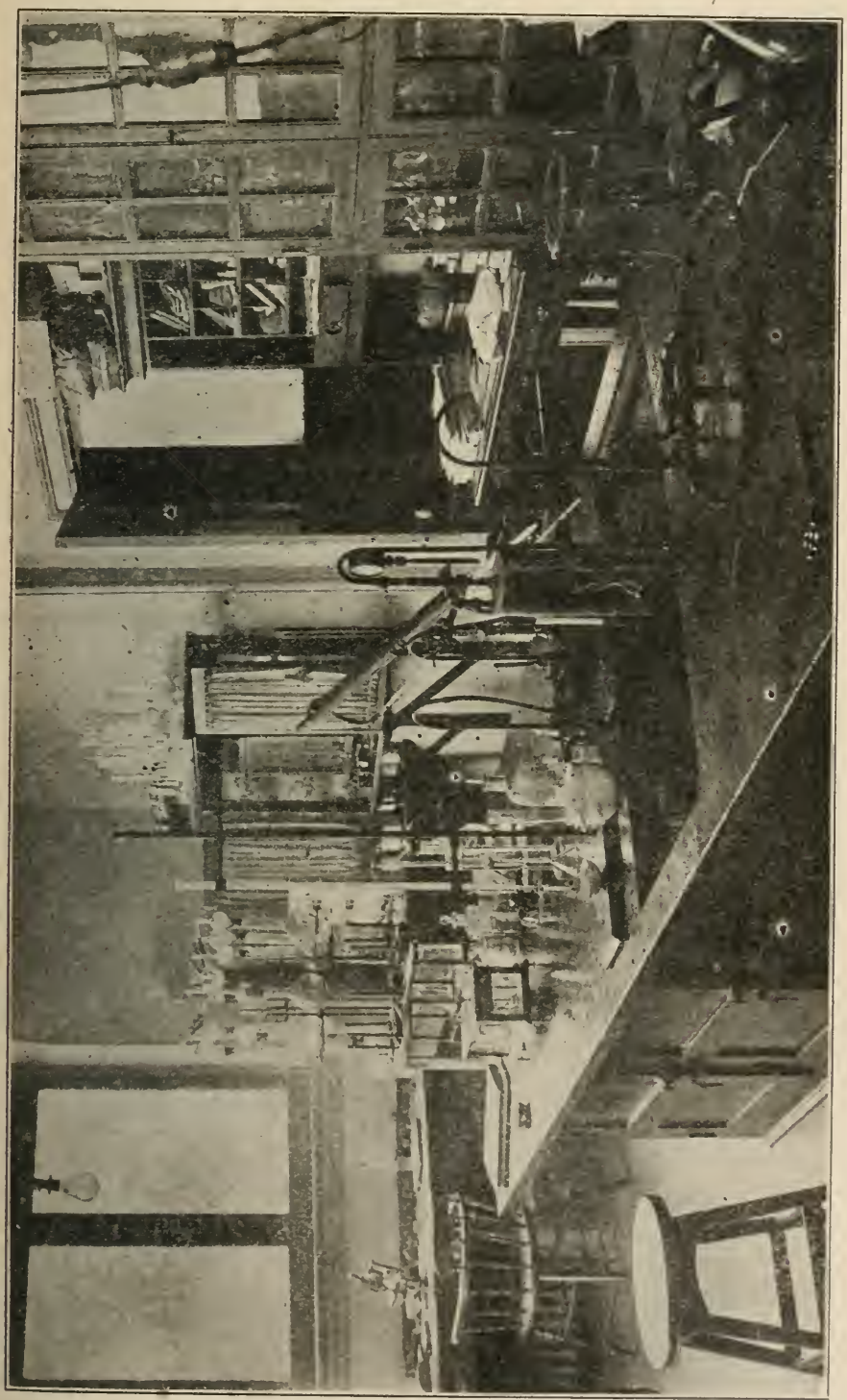
Municipalities	Diphtheritic Swabs.				Tuberculous Sputa		Typhoid Bloods.		Syphilis						
	Release		Diagnosis							Wassermann Reaction				Treponema Pallida.	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—	+	—
Wellington—Continued															
Mount Forest	....	....	....	....	2	8	2	....	....	....	....	....	....	....	....
Palmerston	2	2	1	1	....	1	....	1	....	....	....	....	....	....	....
Rockwood	1	2	....	3	....	....	....	....	....	....	....	....	....	....	....
Wentworth—															
Ancaster	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Bartonville	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Binbrooke	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
Dundas	3	22	5	49	....	4	....	....	....	....	....	....	....	....	....
Freelton	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Hamilton	....	....	....	....	....	....	....	....	....	7	1	3	28	....	....
Lynden	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....
Stony Creek	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Waterdown	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
York—															
Agincourt	....	....	1	2	1	1	....	....	....	....	....	....	....	....	....
Aurora	....	....	3	3	....	....	1	....	....	....	....	....	....	....	....
Birch Cliff	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fairbank	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Islington	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....
Keswick	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
King	....	....	....	1	....	4	1	....	....	....	....	....	....	....	....
Lambton Mills	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Langstaff	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Leaside	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Long Branch	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Markham	....	....	....	4	....	7	1	2	....	....	....	....	....	....	....
Maple	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mimico	18	49	69	359	1	5	1	....	....	....	....	....	....	....	....
Mount Albert	....	....	....	3	1	4	....	....	....	....	....	....	....	....	....
Mount Dennis	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
Newmarket	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Newtonbrook	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
New Toronto	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Pefferlaw	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Pine Grove	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Richmond Hill	1	1	1	1	....	6	1	1	....	....	....	....	....	....	....
Scarboro	....	....	1	2	2	....	....	....	....	....	....	....	....	....	....
Schomberg	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....
Stouffville	2	1	....	1	....	2	....	....	....	1	....	....	2	....	....
Sutton West	3	4	2	2	....	....	....	....	....	....	....	....	....	....	....
Swansea	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Todmorden	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Toronto	6	12	5	36	8	29	9	37	5	76	6	15	257	....	....
Weston	5	3	4	13	3	25	5	12	....	2	....	....	12	....	....
Willowdale	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Woodbridge	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Totals	412	1028	465	2059	385	1774	214	621	5	148	7	22	392	....	3

ONTARIO AT TORONTO FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk											Waters				Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological											
										Tubercle Bac		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	12
..	1	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	9
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	7
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	4	...	4
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	2
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	85
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	1
..	..	3d'gs	1	2	....	....	....	..	..	....	....	....	....	...	....	....	....	13	38	3	96
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	3
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	...	5
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	5
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	2	1	....	1	12
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	...	2
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	...	2
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	4
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	6
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	...	3
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	1	1	....	1	3
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	10	....	...	10
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	...	19
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	5	509
..	..	dog	...	1	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	9
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	3	2	...	7
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	1	4
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	...	1
..	..	dog	1	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	2
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	1
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	...	4
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	5	....	...	17
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	2	....	....	...	7
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	2	....	...	8
3	5	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	17
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	7	....	...	18
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	....	...	2
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	1	....	1	2
15	15	27dg's	9	18	....	....	....	..	..	....	....	....	....	...	....	6	2	128	478	125	1298
..	2	horse	...	1	....	....	....	..	..	....	....	....	....	...	....	....	2	26	....	...	114
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	4	....	...	4
..	..	.....	...	....	....	....	....	..	..	....	....	....	....	...	....	....	....	....	4	...	6
44	67	.....	34	45	....	....	....	..	..	....	....	....	....	...	....	54	25	2732	895	327	11758



Portion of Bacteriological Laboratory.



Portion of Chemical Laboratory.

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Algoma—													
Bruce Mines	2	2					5	9					
Creighton Mine	36				4			40	12	132			
Crean Hill Mine					2	2	2	6	15	70			
Espanola			4	12	2	1	1	20					
Foleyet	3				1	1	1	6		14	5		
Franz									30				
Hornepayne	6			4	2	2	2	16	36	14	5		
John Island									3				
Levack				12	12	10	13	47					
Nestorville				6				6					
Sault Ste. Marie	1	1	1		61	28	2	94		28	10		
Spragge									6				
Worthington				24				24	36				
Brant—													
Brantford	15		12	108		36	5	176	168			1	15
Burford									18				
New Durham									132				
Ohsweken										70	30		
Paris	6	6	6	12	15	16	6	67	50				
Bruce—													
Cargill					8			8					
Chesley										83			
Elmwood				4		5	6	15	9				
Kincardine				6	1	1	1	9					
Lucknow	1	1	1		1	1	1	6					
Paisley						1	1	2					
Port Elgin				8		7		15					
Ripley					4	6		10					
Teeswater				4				4					
Walkerton						2		2					
Wiarton	2	2	2		2	2	2	12	18	28			
Carleton—													
Ashton						2		2					
Carp					8			8					
Kinburn									75				
North Gower				2				2					
Ottawa	52	2	6	1	9	7	4	81	169	448	610	1	24
Westboro				124				124					
Dufferin—													
Orangeville					2		2	4					
Rosemount				4		2		6					
Shelburne									30				
Dundas—													
Morrisburg	1		1			25	12	39		14			
Durham—													
Bowmanville	12	6	14		6	34	22	94	36	54	5	1	24
Garden Hill				2	1	1	1	5	18	144			
Millbrook						5	27	32					
Newcastle	1	1	1		1	1	1	6					
Orono									9				
Port Hope	18		6	12	12	6	2	56	36	72	55	1	24
Elgin—													
Rodney				4		4		8					
Shedden				1	1		1	3					
Straffordville	3					1	1	5		14	5		
West Lorne				1	2			3					

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Essex—													
Amherstburg				15		2		17	318				
Belle River									36	12	5		
Comber						2		2					
Essex							5	5	18				
Ford City				6	3	5	3	17					
Harrow				8	2	2		12	18				
Kingsville				30	6	3	3	42					
Leamington	3		3	3	3		3	15	66				
McGregor					1	1	1	3					
Ojibway				13	6			19					
Pelee Island	2	2	2		2	2	2	12	36	56	10		
Sandwich									105				
South Woodslee				6				6	93				
Tecumseh				4	84	3	2	93					
Walkerville	15	12	12	6	180	5	4	234			15		
Windsor	50	25	50	130	301	25	25	606	15	84			
Frontenac—													
Inverary									9				
Kingston	150	50						200		210			
Sharbot Lake									18				
Glengarry—													
Alexandria						2		2	33				
Apple Hill					1	1		2					
Dalhousie Mills					1	4	1	6					
Dunvegan						2		2					
Maxville				24		2	32	58	75				
Williamstown				4				4					
Grenville—													
Bishop's Mills					1	1	1	3					
Cardinal	3			6				9			5		
Merrickville	1	1	1		1	1	1	6					
Prescott	2		6					8	38				
Grey—													
Annan					1	2		3					
Chatsworth					26			26					
Dundalk	1	1	1		1	1	1	6					
Durham			4		3	3	3	13					
Flesherton					2	4	2	8			25		
Holstein						2		2					
Markdale				6				6					
Marmion					2	5	2	9					
Meaford				1				1					
Owen Sound	8	8	20	48				84	84		5		
Priceville									18				
Haldimand													
Canfield												2	48
Cayuga				12				12	9				
Dunnville	1	1	1	6	1	1	11	22	52				
Fisherville									27				
Hagersville				6				6	3				
Jarvis						2		2					
Lowbanks									14				
Haliburton—													
Haliburton										70	10		
Minden	2		2	2	1	1	1	9	9	90	10		

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wasserman)	Syphilis (Treponema Pallida)	Gonorrhea	[redacted]	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Halton—													
Acton	....	.....	....	12	1	1	1	15	.....	.....	.....	....	.....
Burlington	1	1	1	52	3	1	1	60	.....	.....	.....	3	72
Georgetown	....	.....	....	.....	2	2	....	4	.....	.....	.....	....	.....
Milton	3	.....	....	.....	.....	4	....	7	.....	.....	.....	....	.....
Oakville	18	2	8	24	4	2	4	62	6	.....	5	2	48
Hastings—													
Actinolite	....	.....	....	2	.....	.....	....	2	.....	.....	.....	....	.....
Bancroft	....	.....	....	2	.....	.....	....	2	.....	90	.....	....	.....
Belleville	....	.....	6	.....	.....	7	....	13	81	.....	.....	....	.....
Deseronto	....	.....	....	.....	6	5	4	15	18	.....	.....	....	.....
Detlor	....	.....	....	1	.....	.....	....	1	.....	56	.....	....	.....
Foxboro	....	.....	....	.....	.....	2	....	2	.....	.....	.....	....	.....
Frankford	....	.....	....	4	.....	.....	....	4	.....	.....	.....	....	.....
Madoc	....	.....	....	.....	1	1	1	3	.....	.....	.....	....	.....
Marmora	....	.....	....	22	1	3	....	26	.....	.....	.....	....	.....
Maynooth	....	.....	....	.....	.....	.....	.....	.....	18	.....	.....	....	.....
Roslin	....	.....	....	.....	.....	.....	.....	.....	15	.....	.....	....	.....
Trenton	....	.....	....	.....	1	1	1	3	825	.....	.....	....	.....
Tweed	....	.....	....	.....	.....	.....	.....	.....	9	.....	.....	....	.....
Huron—													
Auburn	....	.....	....	.....	1	1	1	3	.....	.....	.....	....	.....
Belgrave	....	.....	....	.....	.....	.....	.....	.....	.....	.....	5	....	.....
Brussels	....	.....	....	1	.....	3	....	4	.....	.....	.....	....	.....
Ethel	4	.....	....	.....	1	1	1	7	.....	.....	.....	....	.....
Exeter	....	.....	....	10	.....	.....	1	11	.....	.....	.....	....	.....
Goderich	...	.....	....	12	.....	.....	....	12	.....	.....	.....	....	.....
Seaforth	2	.....	2	.....	1	2	....	7	.....	.....	10	....	.....
Wingham	....	.....	....	18	7	6	7	38	.....	.....	.....	....	.....
Kenora—													
Kenora	....	.....	....	8	.....	.....	....	8	120	.....	.....	....	.....
Kent—													
Blenheim	....	.....	....	.....	4	4	4	12	.....	.....	.....	....	.....
Chatham	31	3	3	50	11	14	13	125	108	.....	.....	....	.....
Dresden	....	.....	....	.....	.....	.....	.....	.....	6	.....	.....	....	.....
Merlin	....	.....	....	.....	.....	.....	....	.....	9	.....	.....	....	.....
Ridgetown	....	.....	....	.....	6	7	....	13	9	.....	.....	....	.....
Thamesville	1	1	1	.....	2	2	2	9	.....	28	10	....	.....
Tilbury	12	.....	12	.....	2	5	....	31	18	36	10	....	.....
Wallaceburg	....	.....	....	27	.....	2	....	29	.....	.....	.....	....	.....
Lambton—													
Alvinston	1	1	1	12	1	1	1	18	24	.....	.....	....	.....
Camlachie	....	.....	....	3	.....	.....	....	3	.....	.....	5	....	.....
Forest	....	.....	....	.....	14	.....	....	14	.....	504	.....	....	.....
Inwood	3	3	3	.....	2	2	1	14	.....	14	.....	....	.....
Petrolia	....	.....	....	.....	.....	2	84	86	.....	42	.....	....	.....
Port Lambton	....	.....	....	.....	.....	1	....	1	.....	.....	.....	....	.....
Sarnia	....	.....	....	24	.....	36	....	60	.....	.....	.....	....	.....
Thedford	....	.....	....	.....	1	1	1	3	9	14	.....	....	.....
Watford	....	.....	....	.....	.....	.....	.....	.....	18	.....	.....	....	.....
Lanark—													
Almonte	....	.....	....	.....	.....	2	....	2	150	.....	.....	....	.....
Carleton Place	....	.....	....	12	.....	2	....	14	.....	.....	.....	....	.....
Lanark	....	.....	....	.....	.....	.....	2	2	96	.....	.....	....	.....
Smith's Falls	....	.....	....	96	3	1	2	102	375	.....	.....	....	.....

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued.

Municipalities	Outfits sent out.								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Leeds—													
Athens	....	....	....	....	2	....	....	2	15	....	....	....	....
Brockville	4	4	4	....	7	16	4	39	24	....	....	....	....
Lansdowne	....	....	....	....	....	2	6	8	....	....	....	....	....
Mallorytown	....	....	....	....	....	....	....	....	24	28	10	....	....
Lennox & Adding'n													
Napanee	....	....	....	30	6	....	....	36	60	....	....	....	....
Tamworth	....	....	....	....	....	....	....	....	18	....	....	....	....
Yarker	....	....	....	....	....	....	....	....	36	....	....	....	....
Lincoln—													
Beamsville	3	1	1	....	2	2	2	11	27	....	....	....	....
Grimsby	....	....	....	6	....	8	....	14	....	....	....	1	24
Jordan Station	....	....	....	....	....	....	....	....	75	....	....	....	....
Merriton	....	....	....	....	....	....	....	....	6	....	....	....	....
Niagara-on-the-Lake	....	....	....	12	....	....	....	12	9	....	....	....	....
Port Dalhousie	....	....	....	1	....	....	....	1	....	....	....	....	....
St. Catharines	22	1	8	12	20	33	7	103	24	56	....	1	24
St. David's	....	....	....	2	....	....	....	2	....	....	....	....	....
Smithville	....	....	....	....	1	1	3	5	....	....	....	....	....
Wellandport	....	....	....	....	....	2	2	4	30	....	....	....	....
Manitoulin—													
Little Current	....	....	....	12	12	11	12	47	....	....	....	....	....
Mindemoya	....	....	....	....	1	1	....	2	....	....	....	....	....
Middlesex—													
Ailsa Craig	1	1	1	....	1	1	1	6	3	....	....	....	....
Belmont	....	....	....	....	2	....	....	2	....	....	....	....	....
Harrietsville	....	....	....	....	1	....	....	1	....	....	....	....	....
Kerrwood	....	....	....	12	....	....	....	12	....	....	....	....	....
Lambeth	....	....	....	....	2	....	2	4	....	....	....	....	....
London	50	....	50	24	....	....	....	124	294	48	....	....	....
Strathroy	....	....	....	26	3	....	....	29	....	....	....	....	....
Muskoka—													
Bala	....	....	....	....	....	....	....	....	36	....	....	....	....
Gravenhurst	14	2	12	8	14	2	....	52	54	184	20	....	....
Port Carling	....	....	....	....	....	....	....	....	6	....	....	....	....
Nipissing—													
Alderdale	....	....	....	....	....	....	....	....	72	....	....	....	....
Algonquin Park	....	....	....	1	....	....	....	1	....	....	....	....	....
Boston Creek	....	....	....	3	....	....	....	3	....	....	....	....	....
Burwash	2	2	2	....	2	6	2	16	....	....	....	....	....
Capreol	....	....	....	....	....	....	....	....	....	14	5	....	....
Garson Mine	....	....	....	6	....	....	....	6	....	....	....	....	....
Gowganda	....	....	....	2	....	....	....	2	....	....	....	....	....
North Bay	16	4	4	77	18	24	....	143	28	....	....	....	....
Sturgeon Falls	12	12	24	....	....	3	....	51	....	....	30	....	....
Norfolk—													
Delhi	4	....	6	....	1	5	3	19	....	....	....	....	....
Langton	....	....	....	....	....	....	....	....	63	....	....	....	....
Port Dover	....	....	....	2	....	2	....	4	18	50	....	....	....
Port Rowan	....	....	....	....	....	....	....	....	18	....	....	....	....
Simcoe	....	....	....	6	6	6	....	18	81	....	....	....	....
Vittoria	....	....	....	1	....	....	....	1	....	....	....	....	....
Waterford	....	....	....	1	2	2	2	7	9	....	....	....	....

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Northumberland—													
Brighton					2			2	18	47			
Campbellford					1	1	1	3					
Castleton				3				3					
Cobourg	2		2		1	13	1	19					
Colborne				4				4					
Warkworth									9				
Wooler									9				
Ontario—													
Beaverton				24			2	26	18				
Blackwater				3				3					
Cannington									27	48			
Oshawa			6	14	6	6	7	39	24				
Pickering				2	1	3	1	7					
Port Perry	2		2	7	2	2	2	17					
Seagrave						2		2	9				
Sunderland				2	1	1	1	5		46			
Uxbridge	3		2		6	2		13	18				
Whitby				21		6		27					
Oxford—													
Beachville										42			
Bright				4				4					
Drumbo						5		5					
Embro						2		2					
Ingersoll				36	14	8		58					
Mount Elgin					2			2					
Norwich	3		6	6	1	1	1	18			5		
Otterville									18				
Tavistock									9				
Thamesford									3				
Tillsonburg			2	6		2		10					
Woodstock	4			9	4	6		23	63				
Parry Sound—													
Ardbeg	1	1	1	12	1	11	1	28					
Burk's Falls	6					3	2	11	63				
Kearney				5	2			7	120				
Nobel				2	12			14					
Parry Sound	6		6	12	6	9	7	46		14			
Powassan									18				
Rosseau				8				8					
South River				1			2	3	9				
Sprucedale									9				
Sundridge				3			2	5	45		5		
Peel—													
Alton					2	2		4					
Bolton				6			7	13				1	24
Burnhamthorpe					1	1	1	3					
Caledon East				3	2	1	1	7					
Clarkson				1	2		1	4					
Cooksville												2	48
Port Credit					3	3		6					
Streetsville				1	1	1	1	4		98			

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Perth—													
Atwood	....	....	....	6	....	....	....	6	6	28	10	....	....
Dublin	....	....	....	4	....	....	....	4	51	....	....	....	....
Kirkton	....	....	....	....	....	....	....	....	....	42	....	....	....
Listowel	12	4	12	138	....	13	....	179	24	14	5	....	....
Milverton	....	....	....	....	....	....	....	....	36	....	....	....	....
St. Mary's	....	....	....	....	....	....	....	....	9	....	....	....	....
Sebringville	....	....	....	....	1	1	1	3	....	....	....	....	....
Stratford	12	....	....	30	1	18	3	64	27	....	....	....	....
Peterboro—													
Bailieboro	....	....	....	2	....	....	....	2	....	....	....	....	....
Hastings	....	....	....	....	12	10	....	22	....	....	....	....	....
Havelock	....	....	....	10	8	....	....	18	....	....	....	....	....
Keene	....	....	....	....	....	....	....	....	12	....	....	....	....
Peterboro	28	6	18	12	16	28	30	138	180	200	10	4	96
Prescott—													
Alfred	....	....	....	9	....	3	....	12	....	....	....	....	....
Hawkesbury	2	2	14	2	2	2	3	27	....	....	5	....	....
St. Eugene	....	....	....	....	4	2	....	6	....	....	....	....	....
Vankleek Hill	....	....	....	....	....	1	1	2	....	....	....	....	....
Prince Edward—													
Bloomfield	....	....	....	....	....	....	....	....	21	....	....	....	....
Picton	....	....	....	6	2	2	....	10	24	....	....	....	....
Rainy River—													
Fort Francis	6	....	6	....	3	2	2	19	....	28	10	....	....
Rainy River	....	....	....	....	....	....	....	....	350	....	....	....	....
Renfrew—													
Cobden	....	....	....	....	6	6	6	18	45	....	....	....	....
Douglas	....	....	....	....	2	2	....	4	....	....	....	....	....
Eganville	....	....	4	....	1	1	1	7	....	....	10	....	....
Jewellville	....	....	....	....	....	2	....	2	....	....	....	....	....
Pembroke	....	....	12	72	1	1	1	87	....	....	....	....	....
Renfrew	....	....	....	....	1	1	1	3	....	....	....	....	....
Russell—													
Bourget	....	....	....	....	28	....	....	28	9	....	....	....	....
Rockland	....	....	....	36	....	....	....	36	....	....	....	....	....
Russell	....	....	....	....	....	1	....	1	30	....	....	....	....
Simcoe—													
Alliston	1	....	1	....	1	1	1	5	....	....	....	....	....
Barrie	12	....	....	42	2	8	2	66	150	26	50	....	....
Coldwater	....	....	....	....	2	....	....	2	....	....	....	....	....
Collingwood	28	6	6	16	2	4	2	64	36	42	15	....	....
Cookstown	8	2	2	....	....	1	....	13	72	....	....	....	....
Craighurst	....	....	....	....	....	....	....	....	3	....	....	....	....
Craigvale	....	....	....	3	....	....	....	3	....	....	....	....	....
Creemore	....	....	....	....	1	....	....	1	18	....	....	....	....
Edgar	....	....	....	....	1	....	....	1	....	....	....	....	....
Elmvale	1	1	1	....	1	1	1	6	....	....	....	....	....
Hillsdale	1	1	1	....	1	1	1	6	....	....	....	....	....
Midland	....	....	....	....	2	2	....	4	....	....	....	....	....
Moonstone	....	....	....	....	....	2	2	4	....	....	....	....	....
Orillia	3	3	3	483	103	13	14	622	225	....	....	1	24
Penetang	6	....	....	....	6	16	2	30	....	14	....	....	....
Phelpston	....	....	....	....	....	....	....	....	18	....	....	....	....
Stayner	....	....	....	....	....	....	....	....	27	....	....	....	....
Victoria Harbor	....	....	....	....	8	8	6	22	....	....	....	....	....
Waubaushene	....	....	....	....	....	2	....	2	....	....		....	....

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Continued.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Stormont—													
Cornwall	4	4	4		7	12	4	35					
Mille Roches											15		
Sudbury—													
Chapleau					1	1		2					
Chelmsford									36				
Coniston				24	2	3	2	31					
Copper Cliff	16	1	2		4	2	1	26	3	56			
Massey			3	1	1	1	1	7			5		
Sudbury	22	2	4	181	6	15	2	232	3				
Temiskaming—													
Cobalt	16			56	2	6	2	82					
Cochrane				12	2	3	6	23	9	660			
Elk Lake					1	1	1	3	75				
Englehart					2			2					
Haileybury	1		7	14	20	8	2	52	9				
Iroquois Falls	2		14	98	1	3	1	119	3000	70	5		
Jacksonboro				6	6	5	6	23	72				
Kirkland Lake				32	12			44					
Matheson				1				1	15				
Schumacher				4				4					
Smooth Rock Falls				18		4	2	24	600				
South Porcupine	1	1	1	15	1	1	1	21	150				
Timmins				8		2		10	12	202			
Thunder Bay—													
Fort William	14	2	10					26		596	25		
Jellicoe				3				3					
Nipigon										14	5		
Port Arthur					1	1	1	3	54				
Schreiber						2		2	45				
Victoria—													
Bobcaygeon				1				1					
Kinmount					2			2	18	98			
Lindsay				38	20	3	3	64					
Little Britain									12				
Omemee									18	56			
Victoria Road				39				39					
Woodville										105			
Waterloo—													
Ayr	10			2			1	13	18				
Galt	8		2	3	51	39	3	106		28			
Hespeler						2		2	18				
Kitchener				12	64	12		88					
Lynwood					1	1	1	3					
New Hamburg					12	10	12	34	18				
Preston						5		5					
Waterloo	1	1	1		9	1	1	14					
Welland—													
Bridgeburg					2	10	12	24		14			
Chippawa				18				18	30				
Fonthill	3	3	3					9					
Marshville	1	1	1		1	1	1	6		196			
Niagara Falls	20			41	2	4		67	60		35		
Port Colborne				12	2	3	3	20	180			1	24
Ridgeville									18				
Ridgeway						1		1	6				
Thorold				15				15				2	48
Welland			12	30	4	1	5	52	804	98	80	1	24

YEARLY REPORT.

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1917.—Concluded

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur preventive treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				cases	No. of Injections
Wellington—													
Alma	....	.....	....	6	.....	2	2	10	.....	.....	.....	.....	.....
Clifford	....	.....	....	.....	.....	1	....	1	.....	.....	.....	.....	.....
Drayton	....	.....	....	.....	2	1	2	5	126	.....	.....	.....	.....
Elora	....	.....	....	6	.....	.....	....	6	.....	.....	.....	.....	.....
Fergus	....	.....	....	.....	.....	2	....	2	15	.....	.....	.....	.....
Glenallan	....	.....	....	.....	.....	7	....	7	9	.....	.....	.....	.....
Guelph	....	.....	....	72	50	2	2	126	9	295	.....	.....	.....
Harriston	....	.....	....	.....	.....	10	....	10	.....	.....	.....	.....	.....
Moorefield	6	.....	....	.....	.....	.....	....	6	.....	.....	.....	.....	.....
Mount Forest	2	2	2	6	3	3	4	22	18	.....	.....	.....	.....
Palmerston	....	.....	....	.....	2	.....	....	2	9	.....	.....	.....	.....
Puslinch	....	.....	....	.....	.....	.....	....	.....	.....	146	.....	.....	.....
Rockwood	....	.....	....	.....	4	3	....	7	.....	.....	.....	.....	.....
Wentworth—													
Bartonville	....	.....	....	6	.....	.....	....	6	.....	.....	.....	.....	.....
Binbrook	....	.....	....	.....	2	.....	1	3	.....	46	.....	.....	.....
Dundas	....	.....	....	4	18	2	....	24	18	.....	.....	.....	.....
Hamilton	242	.....	5	13	1	.....	....	261	1,089	445	25	3	72
Lynden	....	.....	....	.....	.....	.....	....	.....	9	.....	.....	.....	.....
Upper Hamilton	....	.....	....	3	.....	.....	....	3	.....	.....	.....	.....	.....
Waterdown	....	.....	....	12	.....	.....	....	12	.....	.....	.....	.....	.....
York—													
Agincourt	1	1	1	.....	1	2	1	7	27	.....	.....	.....	.....
Aurora	....	.....	....	.....	.....	.....	....	.....	.....	.....	15	.....	.....
Birchcliff	....	.....	....	1	.....	.....	....	1	.....	.....	.....	3	72
Etobicoke	....	.....	....	.....	1	1	1	3	.....	.....	.....	.....	.....
Islington	....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	1	24
Jackson's Point	....	.....	....	3	.....	.....	....	3	.....	.....	.....	.....	.....
King	....	.....	....	.....	.....	.....	....	.....	30	.....	.....	.....	.....
Lambton Mills	....	.....	....	4	.....	.....	....	4	.....	.....	.....	.....	.....
Langstaff	....	.....	....	2	.....	.....	....	2	.....	.....	.....	.....	.....
Leaside	....	.....	....	6	.....	.....	....	6	.....	.....	.....	.....	.....
Long Branch	....	.....	....	4	.....	.....	....	4	.....	.....	.....	.....	.....
Markham	....	.....	....	4	1	1	1	7	.....	.....	.....	.....	.....
Mimico	....	.....	....	.....	179	5	3	187	620	.....	.....	.....	.....
Mount Albert	....	.....	....	.....	.....	.....	2	2	.....	28	.....	.....	.....
Mount Dennis	....	.....	....	1	.....	.....	....	1	.....	.....	.....	.....	.....
Newmarket	....	.....	....	1	.....	.....	....	1	.....	.....	.....	.....	.....
Newtonbrook	....	.....	....	2	.....	.....	....	2	.....	.....	.....	.....	.....
Richmond Hill	....	.....	....	.....	2	.....	....	2	.....	.....	.....	.....	.....
Scarboro'	....	.....	....	.....	.....	.....	....	.....	18	.....	.....	.....	.....
Schomberg	....	.....	....	2	.....	.....	....	2	.....	.....	.....	.....	.....
Stouffville	6	.....	....	.....	.....	.....	....	6	.....	.....	.....	.....	.....
Sutton West	....	.....	....	12	3	3	....	18	9	158	.....	.....	.....
Swansea	....	.....	....	.....	.....	.....	....	.....	.....	72	5	.....	.....
Thornhill	....	.....	....	.....	.....	.....	....	.....	.....	14	.....	.....	.....
Toronto	350	13	28	56	18	11	....	476	2,959	620	35	28	672
Weston	18	1	2	12	12	16	3	64	90	.....	5	.....	.....
Willowdale	....	.....	....	4	.....	.....	....	4	.....	.....	.....	.....	.....
Woodbridge	....	.....	....	1	.....	.....	....	1	.....	.....	.....	.....	.....
Total	1492	217	514	3,316	1,793	1,025	619	8,976	17,144	7,577	1,240	60	1,431

REPORT OF THE BRANCH LABORATORY OF THE BOARD AT LONDON (INSTITUTE OF PUBLIC HEALTH)

The number of Laboratory examinations made by the Branch Laboratory of the Provincial Board of Health at London (Institute of Public Health) in 1917 shows a marked increase over 1916. The increase was 30.5 per cent. There has also been an increase of 8.3 per cent. in the number of communities taking advantage of the laboratory service.

Examinations.	1916	1917	Increase
Diphtheria Swabs	2,512	4,052	61.4%
Tuberculous Sputa	955	810	—
Typhoid Blood	197	148	—
Milk (samples examined for fats and preservatives)			
Milk (Bacteriological Analysis)			
Water (Chemical Analysis)	169	117	—
Water (Bacteriological Analysis)	221	159	—
Total	4,050	5,286	30.5%
Communities served	96	104	8.3%

Outfits, Vaccines and Treatments supplied by the Laboratory at London during the year 1917.

Outfits sent out:	
Syphilis (Wassermann)	41
Syphilis (Treponema Pallida)	..
Gonorrhœa	18
Water	37
Diphtheria	52
Tuberculosis	61
Typhoid	19
Total	228
Communities served	17

H. W. Hill.
Director.

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Rabies Diagnosis			
	Release		Diagnosis						Animal	Negri Bodies		Animal Inoculations
	+	−	+	−	+	−	+	−		+	−	
Brant—												
Brantford							11					
Paris				4	4	5						
Bruce—												
Lucknow						1						
Mildmay					1	4						
Southampton					3	1						
Wiarton						1						
Elgin—												
Dutton				2		2						
St. Thomas							1	3				
Wallacetown		1	1	2		1						
West Lorne		3	2	1			2					
Essex—												
Belle River												
Comber								1				
Ford City		2		3	1			1				
Harrow			1	2		3						
Kingsville	1	4	1	4		2						
Sandwich			1									
Tecumseh	2	75	5	22			1					
Walkerville	41	322	8	336	2	11	3	2				
Windsor	103	614	11	361	2	6	2	1				
Huron—												
Blyth						2						
Brucefield					2	1		2				
Exeter				1								
Seaforth												
Wingham				1								
Zurich				1								
Clinton							1	1				
Kent—												
Blenheim		1	2	2	3	5	1	2				
Chatham			1	2	4	6	1	7				
Duart				2		1						
Goderich			1	3	3			5				
Merlin				1								
Ridgetown	2	5		1		5	1	4				
Thamesville				7	1	7		1				
Tilbury				1			1					
Wallaceburg				1		1	1	3				
Wheatley						2						
Lambton—												
Arkona			1	1								
Brigden					1	1						
Camlachie					1	3		1				
Florence												
Forest				1								
Inwood		1		2		4		1				
Petrolia				1		2						
Pt. Lambton						1		1				
Sarnia					3	5						
Thedford					1	1						
Watford				2	1	9		3				
Wyoming		2	1	1		1		3				

ONTARIO AT LONDON FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Milk										Waters				
Food Content		Preservatives		Bacteriological										
				Tubercle Bac.		Pus Cells								
Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Chemical	Bacterial	Liquors for License Dept.	Miscellaneous Specimens	Total for year
														1
														13
														1
														5
										1				5
														1
														4
														4
														5
														8
														1
														7
														6
										6	5			23
														1
														105
														725
														1,100
														2
														5
										1	1			3
										3	3			6
														1
														1
														2
														16
														21
														3
										2	2			16
														1
										4	4			26
														16
														2
														6
														2
														2
														2
										3	3			11
										1	1			2
														1
														8
														3
														2
										1	1			10
										2	2			6
														15
														8

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Rabies Diagnosis			
	Release		Diagnosis							Negri Bodies		
	+	−	+	−	+	−	+	−	Animal	+	−	Animal Inoculations
Lincoln—												
Grimsby						1		1				
Bismark								1				
Middlesex—												
Adelaide					1							
Belmont		2	2	6		2						
Byron San				2	17	83						
Delaware												
Dorchester			1	1								
Glencoe						4		1				
Granton		1		17	2	2						
Harrietsville				1								
Hyde Park					1	2						
Komoka												
Lambeth				1	2	7						
London	100	422	180	1,249	70	407	11	49				
Lucan			5	34	2							
Melbourne						3						
Mt. Brydges					2	4						
Newbury						1						
Parkhill				3		3						
Poplar Hill						2						
Strathroy				1	3	2						
Wardsville						1						
Muskoka—												
Severn Bridge					1							
Norfolk—												
Langton						1						
Port Dover						1						
N'thumberland & Durham												
Millbrook						1						
Oxford—												
Bright							1	1				
Embro					1	2	6	3				
Ingersoll				3	2	7						
Innerkip				2	1	2						
Lakeside						5						
Mount Elgin												
Norwich								1				
Princeton								1				
Tavistock												
Thamesford	2	2	1	2	1	3	1					
Tillsonburg				2								
Woodstock				5	2			1				
Perth—												
Fullerton								1				
Listowel				1	1		1	2				
St. Mary's				1	1	5	1					
Sebringville						2						
Stratford					1	2						
Rainy River—												
Emo						1						
Fort Francis					1	1	1					

ONTARIO AT LONDON FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Milk										Waters				
Food Content		Preservatives		Bacteriological										
				Tubercle Bac.		Pus Cells								
Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Chemical	Bacterial	Liquors for License Dept.	Miscellaneous Specimens	Total for Year
														2
														1
														1
														12
										13	24			139
														2
														5
														22
														1
														3
										6	6			12
														10
										38	72			2,598
														41
														3
										2	2			10
														1
														6
														2
										2	2			10
														1
														1
														1
														1
														1
										1	1			4
														12
										13	13			38
										1	1			7
														5
										11	11			22
														1
														1
										1	1			2
														12
														2
														8
														1
														5
										1	1			10
														2
										1				4
														1
														3

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Rabies Diagnosis			
	Release		Diagnosis									
	+	—	+	—	+	—	+	—	Animal	Negri Bodies		Animal inoculation
										+	—	
Timiskaming—												
Smooth Rock Falls												
Waterloo—												
Galt		5	2	9		7		2				
Kitchener				1				1				
New Dundee								2				
New Hamburg			1									
Preston						3						
Waterloo						1	1					
Wellesley				1								
Wellington—												
Rockwood				1								
Palmerston						3						
York—												
Toronto												
Totals	251	1462	228	2,111	145	665	39	109				

ONTARIO AT LONDON FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Milk										Waters				
Food Content		Preservatives		Bacteriological										
				Tubercle Bac.		Pus Cells								
Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Chemical	Bacterial	Liquors for License Dept.	Miscellaneous Specimens	Total for year
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	.....
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	25
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	2
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	2
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	1
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	3
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	2
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	1
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	1
.....	.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	....	.....	3
.....	.....	.....	.....	.....	.....	.....	....	....	....	3	3	....	.....	6
.....	.....	.....	.....	.....	.....	.....	....	....	....	117	159	....	.....	5,286

Outfits, Vaccines and Treatments supplied by Laboratory at London during the year 1917:—

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver Nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	Number of Injections
Essex—													
Belle River	6	.....	6	....	6	10	6	34	.....	....	.....	....	.....
Kent—													
Chatham	3	.....	2	....	....	....	....	5	.....	....	.....	....	.....
Merlin	4	.....	....	....	....	....	....	4	.....	....	.....	....	.....
Lambton—													
Thedford	....	.....	....	2	....	....	....	2	.....	....	.....	....	.....
Middlesex—													
Byron San	4	.....	....	23	....	33	....	60	.....	....	.....	....	.....
Delaware	....	.....	....	3	....	....	....	3	.....	....	.....	....	.....
Komoka	6	.....	....	....	....	....	....	6	.....	....	.....	....	.....
London	....	.....	....	....	16	5	7	28	.....	....	.....	....	.....
Lucan	....	.....	....	....	12	6	....	18	.....	....	.....	....	.....
Strathroy	....	.....	....	....	6	6	6	18	.....	....	.....	....	.....
Oxford—													
Ingersoll	....	.....	2	....	....	1	....	3	.....	....	.....	....	.....
Innerkip	....	.....	....	1	....	....	....	1	.....	....	.....	....	.....
Thamesford	....	.....	....	....	12	....	....	12	.....	....	.....	....	.....
Woodstock	3	.....	2	....	....	....	....	5	.....	....	.....	....	.....
Perth—													
St. Mary's	....	.....	....	1	....	....	....	1	.....	....	.....	....	.....
Timiskaming—													
Smooth Rock Falls	6	.....	6	6	....	....	....	18	.....	....	.....	....	.....
Waterloo—													
Galt	9	.....	....	1	....	....	....	10	.....	....	.....	....	.....
Totals	41	.....	18	37	52	61	19	228	.....	....	.....	....	.....

REPORT OF THE BRANCH LABORATORY OF THE BOARD AT KINGSTON

The Chairman and Members of the Provincial Board of Health:

GENTLEMEN.—I have the honour to submit the report of the work done in the local Laboratory of the Provincial Board of Health during the year 1917.

In this year 4,692 specimens were examined as per appended table.

Diphtheria:—		
Swabs for Release from Quarantine		520
Positive	151	
Negative	369	
Swabs for Diagnosis		679
Positive	129	
Negative	550	
Sputums for Tubercle Bacilli		1,513
Positive	308	
Negative	1,205	
Blood for Typhoid Reaction		430
Positive	89	
Negative	341	
Syphilis—Wassermann Reaction		165
Positive	24	
Negative	141	
Water for Bacteriological Analyses		538
Milk for Examination (Preservatives, Tubercle Bacilli, etc.)		6
Miscellaneous Samples		841
Total		4,692

Respectfully submitted,

W. T. CONNELL,

Assistant Bacteriologist.

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis		Rabies Diagnosis			
	Release		Diagnosis						Wassermann Reaction					
	+	—	+	—	+	—	+	—	+	—	Animal	Negri Bodies +	Negri Bodies —	Animal Inoculations
Algoma—														
Richard's Landing						1								
Bruce—														
Paisley		1		2		1	3	6						
Carleton—														
Manotick			1			3								
North Gower														
Ottawa					1	1	2		4					
Richmond					2	1	1							
Dundas—														
Brinston					1									
Chesterville					1	3		1						
Winchester			1		1	7	2	9						
Essex—														
Essex			1	2	1	10	1	2						
Leamington				1										
Frontenac—														
Barriefield						1								
Flinton					1	2								
Harrowsmith					1	1	1	4						
Inverary			1			1		1						
Joyceville						2								
Kingston	124	310	79	422	97	598	31	129	13	122				
Portsmouth			1	7	131	242		4	2					
Sydenham			2	4	1	2		4						
Verona				3		3	2	5						
Wolfe Island							1	6						
Glengarry—														
Alexandria														
Dalhousie Mills						3	1	1						
Dalkeith					1	4								
Lancaster			2											
Maxville						7		1						
Williamstown						3								
Grenville—														
Cardinal						3								
Jasper					1			1						
Kemptville				2		1	1	1						
Merrickville								2						
Prescott						2	2	2						
Halliburton—														
Minden						3		1						
Hastings—														
Bancroft					1	8		4						
Belleville		1	1	11	16	30	9	33	1	2				
Deseronto		7	1	6		10	1	2	1	1				
Foxboro				1	2	1								
Marlbank					1			1						
Roslin			1	1	1	5		4						
Shannonville						2								
Stirling		3	2		1									
Trenton						4		1						
Tweed					3	1								
Huron—														
Wingham	4	4	12	5		1		1						

OF ONTARIO AT KINGSTON FOR THE YEAR 1917.—SPECIMENS EXAMINED.

Milk								Waters				
Food Content		Preservatives		Bacteriological								
				Tubercle Bac.		Pus Cells						
Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Chemical	Bacterial	Miscellaneous Specimens	Total for Year
													1
													13
													4
											1		1
											1		9
													4
													1
													5
													20
												1	18
													1
1			1								46	1	50
													3
											1		8
											3		6
											1		3
2			2								322	275	2,526
											8	5	400
													13
											3		16
													7
											1		1
													5
													5
													2
													8
											1		4
													3
													2
												1	6
												3	5
											3	1	10
												1	5
													13
											1	298	403
											10		39
												1	5
													2
													12
													2
													6
												1	6
												1	5
													27

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis		Rabies Diagnosis			
	Release		Diagnosis						Wassermann Reaction					
	+	—	+	—	+	—	+	—	+	—	Animal	Negri Bodies +	Negri Bodies —	Animal Inoculations
Lanark—														
Almonte						1		1						
Carleton Place					1	13	3	12						
Lanark								1						
McDonald's Cor's.					2	5								
Perth						1	1	1						
Smith's Falls			1	1	3	30	4	12						
Leeds—														
Athens						3								
Brockville	4	5	7	28	12	25	4	10	2	7				
Chaffey's Locks														
Delta						1								
Elgin				1		1		2						
Frankville					1	1								
Gananoque				1	1	11		2						
Lansdowne			1	6		6	2	4						
Lyn						1								
Mallorytown				3		1								
Newboro				1										
Westport			1	1	2	2		2						
Lennox and Add'n.														
Bath						4	1	3						
Denbigh						1								
Enterprise						1								
Napanee		1	2	2	6	17	1	2		3				
Newburg						3		2						
Odessa						12		4						
Tamworth						1		3						
Yarker						1	1	4						
Northumberland & Durham—														
Campbellford						1	1	1		2				
Cobourg					1	1	1	7						
Port Hope	8	2	3	1		1								
Roseneath						1								
Peterboro—														
Hastings					1			2						
Peterborough						4		2						
Warkworth														
Prescott & Russell														
Bourget	7	25												
Casselman														
Fournier	2	5	2	6	1	3								
Hawkesbury						6	1	3						
Metcalfe				2		2								
Orleans						1								
St. Eugene						1								
Prince Edward—														
Picton						4	1	1						
Renfrew—														
Arnprior			1	1	1	2			1					
Calabogie				3				1						
Cobden				1	3	15		2						
Douglas	2	2		5	1	3		2						
Killaloe						5								
Pembroke				1	4	11				1				

OF ONTARIO AT KINGSTON FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Milk										Waters.			
Food Content		Preservatives		Bacteriological									
Fats	Total Solids	+	—	Tubercle Bac. +	Tubercle Bac. —	Pus Cells +	Pus Cells —	Count	Extraneous Matter	Chemical	Bacterial	Miscellaneous Specimens	Total for year
													2
												5	34
													1
													7
											7		10
												2	53
													3
											62	232	398
											6		6
											2		3
											1		5
													2
													15
												1	20
													1
													4
											6		7
													8
													8
													1
													1
											25	3	62
													5
												1	17
													4
											4		10
													5
													10
												1	16
													1
													3
													6
											1		1
													32
											1		1
													19
												1	11
													4
													1
													1
													6
											4		10
													4
													21
													15
													5
													17

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis		Rabies Diagnosis			
	Release		Diagnosis						Wassermann Reaction					
	+	−	+	−	+	−	+	−	+	−	Animal	Negri Bodies +	Negri Bodies −	Animal Inoculations
Renfrew—Contin'd.														
Petawawa	....	....	....	2	.....	2	....	....	.....	1	....	....	....	.....
Renfrew	....	3	1	10	.....	13	1	2	.....	1	....	....	....	.....
Westmeath	....	....	....	....	.....	1	....	....	.....	....	....	....	....	.....
Simcoe—														
Barrie	....	....	....	....	.....	.....	6	13	.....	....	....	....	....	.....
Churchill	....	....	....	....	.....	3	....	1	.....	....	....	....	....	.....
Stormont—														
Cornwall	....	....	4	2	2	6	1	8	.....	1	....	....	....	.....
Finch	....	....	1	2	.....	4	....	1	.....	....	....	....	....	.....
Mille Roches	....	....	....	....	.....	.....	....	1	.....	....	....	....	....	.....
Newington	....	....	....	2	1	5	2	2	.....	....	....	....	....	.....
Timiskaming—														
Cochrane	....	....	....	1	.....	.....	....	....	.....	....	....	....	....	.....
Wentworth—														
Hamilton	....	....	....	....	.....	1	....	....	.....	....	....	....	....	.....
Grand Total	151	369	129	550	308	1,205	89	341	24	141	....	....	....	.....

OF ONTARIO AT KINGSTON FOR THE YEAR 1917.—SPECIMENS EXAMINED.—*Con.*

Milk										Waters			
Food Content		Preservatives		Bacteriological									
				Tubercle Bac.		Pus Cells							
Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Chemical	Bacterial	Miscellaneous Specimens	Total for Year
											5		10
											11	5	47
													1
													19
											1		5
													24
													8
													1
													13
												1	2
													1
3			3								538	841	4,692

APPENDIX "A"

APPENDIX "A"

The reports appearing in this Appendix were received from the Secretaries of the Local Boards of Health of the cities and towns of the Province of Ontario, in conformity with section 23, ss. 3, of the Public Health Act, and have been edited by the Secretary of the Board.

BRANTFORD, November 1st, 1917.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN,—The following is a brief report of the department for the year ending October 31st, 1917:—

MORTALITY STATISTICS.

For the year of this report there has been registered, exclusive of still births, 308 deaths, which in a population as given by the assessors of 27,664, gives a mortality rate of 11.1 per thousand. Among the causes were found:—

Tuberculosis	13
Pneumonia	43
Meningitis (tubercular)	6
Croup and Diphtheria	6
Typhoid fever (one an outside case)	2
Whooping cough	2
Cholera infantum	3

As to ages—38 were over 80 years of age.
90 were over 60 years of age.
69 were under 1 year.
22 between 1 and 5 years of age.

INFECTIOUS DISEASES.

For the past twelve months there has been reported in all 105 cases of infection, with 10 deaths, being one of the lowest on record, and as compared with the year preceding, when we had 411 cases, is quite satisfactory, and were as follows:—

Diphtheria and Croup: of this class there were 15 cases—6 deaths.
Scarlet fever: 11 cases—no deaths.
Measles: 44 cases—no deaths.
Spinal meningitis: 1 case.
Infantile paralysis: 1 case.
Typhoid fever: 28 cases—2 deaths, one being an outside death which occurred at the hospital.

It is in connection with the matter of typhoid fever that I wish to call your attention in this report, as the known factors in the spread of this disease are largely in water and milk supplies. In the recent outbreak the matter of milk has been demonstrated as an indubitable source, and it is to my mind worth going definitely into as follows:—

In the latter part of August, within a few days of each other, reports of typhoid fever began to come in, and, what was most apparent, that in each the milk supply was the same, and took the matter up at once and investigated the condition of the supply and its source. Three supplies were being distributed by this one vendor where local conditions were good, but found that the one supply which had been distributed practically separate was the one on which the typhoid cases have developed. On further investigation of the supplies in the one particularly above noted, in which stable, cattle, etc., were in apparently good condition, it was found that one of the members of the family a year previously had typhoid fever from which she made but a fair recovery. The period of time that had elapsed would probably render the cause of infection from this source out of the question, but it was found otherwise, as this member of the family, being at once suspected as a carrier, investigation showed that although every care apparently being taken in the way of washing up any vessels, which after washing were placed on a bench in the rear of the kitchen where

the sun would strike them. All very good, but a closet some 60 feet away which had been used by all the family and the suspect as well became the menace when the fly season developed which would be about August. This was the theory applied which was further proven that the suspect still had the bacillus in her system. Excrement from closet developed the same share of bacillus, as also did the son, who afterwards developed the disease, as did the son of the vendor. This has been given more in detail that we might understand that in milk we have a commodity that may be a great conductor of disease when every apparent condition surrounding it would appear normal, for out of this one carrier no less than 20 cases developed in the supply and which immediately ceased when the supply was cut off. This of course brings up the matter of what shall we do to prevent further outbreaks from such or other infections, for as milk is a universal food it is evident that a universal, method of dealing with it should be adopted for rendering it safe food for all, for notwithstanding the improvements in the care of herds, stables, and milking, the methods at present on account of shortage of labor and necessarily hurried care that is given the milk from the cow to the consumer leaves something lacking in the chain of safety. Therefore I am compelled to state, that to my mind, the only method that can be adopted to render it safe to the consumer is the proper sterilization of the supply immediately before it reaches him. And to this end I am asking you as a Board to consider the matter and have the incoming council have by-laws prepared for such.

This of course means expense to the vendors and thus to the consumer, but as compared with the loss of lives, etc., which a community may suffer as it did in the recent outbreak, is incomparable. Moreover, without going into details, I might add if it had to be adopted as public-owned institution the money would be well invested in the guarantee of a pure supply, which would not alone reduce the infant mortality, but would reduce many ailments that are now known to originate from sources of infected milk.

The above I submit for your consideration.

F. G. E. Pearson,
Medical Officer of Health.

CHATHAM.

Dr. T. L. McRitchie, M.O.H.

During the year 1917 there have been 253 deaths registered. Of this number 68 were non-residents of the city. The remaining 185, as belonging to the city, gives a death rate for the year of 13 per one thousand of population. Total number of births for the same period was 303, a birth rate of 22 per every thousand. This gives an increase of 118 births over the total deaths of the city.

There have been 216 cases of communicable diseases reported during the year, with but two deaths, viz.: one of a very virulent type of scarlet fever, the glands about the face and neck all suppurating, the victim living only forty-eight hours. The other case was one of diphtheria that had not been reported until the sixth day, when medical assistance was called in; even at this date, after repeated large doses of antitoxin, it looked like an even chance after the first forty-eight hours, until the mother, disobeying instructions, raised the patient up for nourishment collapsed in her arms.

Scarlet Fever.—There have been seventeen cases; most of these can be traced to Detroit, where a severe epidemic was raging for some months during the first half of the year.

Measles.—There were 114 cases, there being 17 in February, 52 in March, 20 in April, while the other 25 cases were spread over a number of months. No deaths.

Chicken-pox.—Forty-seven cases. Of these twenty-four were in the last quarter of the year 1916. No deaths.

Smallpox.—We had one typical case, that of a boy 15 years of age, a profuse rash appearing over the whole body, face and scalp, palms of hands and soles of feet, leaving the bluish pock-mark. The party became infected through contact with some of the French people of the adjoining township of Dover, where are some cases almost every year. Prompt action in quarantining and vaccinating of all persons exposed prevented a further outbreak.

Diphtheria.—There were 29 cases; many of these are traceable to Detroit; young adults who were working in that city, not feeling well, came home, where in a number of instances the disease was diagnosed the same day. One death I believe due to lateness in calling a physician that the antitoxin might have been given early and in large doses.

Tuberculosis.—Two cases, both of long standing and both fatal.

Mumps.—Six cases; no sequelæ.

I might say that the greatest difficulty in controlling these communicable diseases is the neglect of many people to call in the family physician early before many others have been exposed. Of the medical men I have no complaint to make, as the rule is promptness.

During my term of office since the 1st of February I have made tests of 108 samples of milk. Most of these were highly satisfactory, our local by-law requiring 3.5 per cent. of B.F., and in many instances the percentage being over 4 p.c.

Owing to the great and almost daily rainfall during the spring and early summer, the Water Commissioners had much difficulty in giving the citizens the usual supply of pure water, since our supply is taken from the river Thames, into which there are so many large drains or dredge canals empty. After every heavy rainfall there is a freshet which carries many impurities into our source of supply.

Public lavatories have been inspected at regular intervals and are being kept in fair condition. I also enclose the Sanitary Officer's report.

DAVID HOLMES, SANITARY INSPECTOR.

Sanitary Inspector's Report for year ending November 30th.

I have put up 198 contagious disease cards, disinfected premises and persons on 206 different occasions during the year. Have had 185 complaints made to me and have investigated them all, and in each case had the complaint attended to. Inspected all the cellars twice during the year, and the slaughterhouses three times.

Went to the country and inspected the different farm buildings occupied by the cows that supply milk to the city milk dealers. Inspected the different milk depots frequently during the year. Gathered one hundred and twelve samples of milk for the M.O.H. for testing purposes and assisted in this work. Inspected all the butcher shops six different times. Have had 1,145 closets cleaned during the year thus far. Collected water eleven different times and expressed the same to Toronto for analysis as to its purity for drinking purposes, having received orders from the M.O.H. Inspected the laundries 52 times and the cafes twelve times during the year.

As Humane Officer have had 14 different cases to attend to, being necessary to lay up six different horses until fit for work. As weed inspector had charge of the weed cutters from the 10th of June till the 15th of September. This last year I think there has been a great improvement over previous years, with still room for further improvement.

FORT WILLIAM.

DR. E. B. OLIVER, M.O.H.

In accordance with the provisions of the Ontario Public Health Act, I beg to submit herewith my annual report for the year ending October 31st, 1917.

You may recollect that last year I stated that the most outstanding feature of my report was that we had but two deaths from typhoid fever. This year I am delighted to say that we have not had a death. I have been able to trace statistics back fifteen years in the municipality, and this is the first year in which there has not been a death from typhoid fever in that time. Furthermore, the decrease both in morbidity and mortality has been gradual, so that I feel sure that it will be permanent.

The mortality from reportable diseases has decreased fifty per cent., there having been twenty-one deaths this year and forty-three last year. This is an excellent showing and one which I trust we shall be able to continue.

We ran over our estimate this year on account of the expanded salaries and the purchase of an automobile.

Vital Statistics.

Estimated population 18,000
Death rate per 1,000 population (excluding still births) 12.66
This rate includes all who died in the municipality, whether residents or not.
Birth rate per 1,000 population (excluding still births) 41.22
This is 6.63 lower than last year.
Infant mortality rate per thousand births 133.42
This rate is higher than last year's.

Communicable Diseases.

Smallpox.

There were two cases of smallpox reported. Statistics for the last five years follow:

Year.	Cases reported.	Deaths.
1913	11	0
1914	0	0
1915	8	0
1916	3	0
1917	2	0

Scarlet Fever.

There were one hundred and ten cases of scarlet fever reported. This is exactly the same as 1914. There were three deaths. Statistics follow:

Year.	Cases reported.	Deaths.
1913	45	1
1914	110	2
1915	18	0
1916	4	0
1917	110	3

Below appear the statistics by month, age and sex, recovery and death.

Month.	Cases.	Sex. M.	Sex. F.	Under 5 years.	5–9 years.	10–14 years.	15–19 years.	Over 19 years.	Recovery.	Death.	
1916											
November	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	3	2	1	1	2	.....	.....	.....	3	.....	.....
1917											
January	4	2	2	.....	3	1	.....	.....	3	1	7 yrs.
February	1	....	1	.....	.....	1	.....	.....	1	.....	.....
March	4	4	....	2	1	1	.....	.....	4	.....	.....
April	3	2	1	.....	2	.....	.....	1	2	1	6 yrs.
May	6	3	3	2	4	.....	.....	.....	6	.....	.....
June	5	3	2	2	1	.....	1	1	5	.....	.....
July	10	4	6	3	5	2	.....	.....	9	1	7 yrs.
August	16	6	10	8	6	1	.....	1	16	.....	.....
September	36	15	21	6	25	5	.....	.....	36	.....	.....
October	22	12	10	6	9	3	.....	4	22	.....	.....
Total	110	53	57	30	58	14	1	7	107	3	.....

Of the seven adult cases reported, all were definitely traced, showing that direct or indirect contact was the cause.

Diphtheria.

There were but thirteen cases reported. There was one death. This is the best record in five years.

Year.	Cases reported.	Deaths.
1913	19	2
1914	24	2
1915	25	2
1916	33	5
1917	13	1

Measles.

The number of measles cases was considerably less than last year, but greater than any other year.

Year.	Cases reported.	Deaths.
1913	144	0
1914	279	1
1915	8	0
1916	581	7
1917	338	3

Whooping Cough.

Cases of this disease show the greatest contrast with last year, as is shown below.

Year.	Cases reported.	Deaths.
1913	1	3
1914	0	1
1915	33	2
1916	196	17
1917	10	1

Erysipelas.

Below are the statistics of this disease during the last four years.

Year.	Cases reported.	Deaths.
1914	11	4
1915	5	0
1916	6	1
1917	13	1

Chickenpox.

Year.	Cases reported.	Deaths.
1914	3	0
1915	3	0
1916	16	0
1917	97	0

Rubella.

For the first time within the history of the records there were several cases of rubella this year.

Year.	Cases reported.	Deaths.
1917	181	0

Mumps.

Year.	Cases reported.	Deaths.
1914	3	0
1915	3	0
1916	16	0
1917	90	0

Pulmonary Tuberculosis.

There were 15 cases, with 12 deaths.

Year.	Cases reported.	Deaths.
1913	12	19
1914	17	11
1915	28	23
1916	19	18
1917	15	12

Typhoid Fever.

This is the most gratifying of all the reports. For the first time in fifteen years there were no deaths.

Year.	Cases reported.	Deaths.
1913	80	5
1914	35	5
1915	23	7
1916	18	2
1917	11	0

Poliomyelitis.

There were no cases of this disease reported and no deaths. Last year there were eleven cases reported and three deaths.

A general resumé of the Communicable Diseases reported follows:

Disease.	Cases reported.	Deaths.
Measles	338	3
Rubella	181	0
Mumps	90	0
Scarlet Fever	110	3
Whooping Cough	10	1
Chickenpox	97	0
Erysipelas	13	1
Typhoid Fever	11	0
Smallpox	2	0
Diphtheria	13	1
Tuberculosis	15	12
Total	880	21

Miss K. Munroe, School Nurse.

I beg to present herewith my report of the work done during the eight months of this year:

Month.	Inspections.	Calls.	Exclusions.
1917			
January	896	44	11
February	811	32	16
March	875	30	15
April	501	9	31
May	939	80	21
June	504	57	9
September	532	109	8
October	415	7	49
	5,473	368	160

Laboratory Report.

The following examinations were made:

Milk samples from dairymen for dirt and butter fat	245
Milk samples brought by householders	16
Samples of breast milk	24
Samples of cream	8
Smears examined for diphtheria	55
Specimens of sputum examined for bacillus tuberculosis	49
Sundry examinations	19

A detailed report of this work follows:

Name of Vendor.	No. of Tests.	Clean.	Slightly Dirty.	Dirty.	Fat Average.
Brown Bros.	18	15	2	1	3.46
City Dairy	22	16	2	4	3.20
H. Crabtree	19	19	.....	.....	3.45
J. A. Kellough	23	17	6	.....	3.36
R. Lewtas	12	6	3	3	3.45
Marsutti	9	8	1	.....	3.90
F. McCarthy	21	17	3	1	3.41
Ed. Otway	17	16	1	.....	3.40
Jno. Otway	11	10	1	.....	3.33
Jas. Otway	22	19	2	1	3.47
J. A. Parker	2	1	.....	1	3.70
A. Rasilanen	1	.....	1	.....	3.60
F. Scollie	25	9	9	7	3.28
D. R. Thompson	22	17	5	.....	3.37
B. Webster	16	13	2	1	3.34
F. Widnall	5	4	1	.....	3.44

You will note that, of the 245 samples examined, 39 were somewhat dirty and that 19 were dirty, and of these 19 that were dirty, over one-half, or 11, were from Scollie's and the City Dairy, which sell country milk. Seven of the dirty samples were from Scollie's and four from the City Dairy. If we leave out of account R. Lewtas, who has now gone out of business here, and who had three dirty samples, we have but four dirty samples for all the other vendors. This is a good showing for the dairies, but the constant sale of dirty milk produced in the country must cease. During the next year this will be closely watched, and should its sale continue, I will apply to your Board for cancellation of licenses of the vendors.

For the present vendors, the fat average is 3.37, which is fair only. For all the vendors of the year—that is, including those who have gone out of business it is 3.44.

Of the swabs examined for diphtheria, 46 were for diagnostic purposes and nine were for release. Of the former, six were positive and forty negative, and of the latter one only was positive.

Of the examination of sputum for bacillus tuberculosis, eight were positive and forty-one were negative.

Medical Relief.

The following is the report of medical relief work for the year:

Month.	Visits Made.	Office Consultations.	Anæsthetics Administered.
1916			
November	5	1	
December	6	.....	2
1917			
January	6	1	
February	9	6	
March	8	2	
April	6	4	
May	4	1	
June	.....	1	
July	3	2	
August	.....	2	
September	2	2	
October	6	2	
	55	24	2

...n to this, some laboratory work was done on this account.

S. MACNAMARA, PLUMBING INSPECTOR.

I beg to report the issue of ninety-two (92) plumbing permits for the year ending October 31st, 1917. Sixty-four (64) represented new installations, and twenty-eight (28) alterations and additions. Four hundred and eleven (411) calls of inspection were made. Thirty-two (32) old premises in which sanitary connections were not installed were connected to the sewer. This number included those installed by the City.

H. PADDINGTON, CLEANSING SUPERINTENDENT.

I beg to present my report for the year ending October 31st, 1917:

Garbage Collection and Disposal.

As mentioned in my report of 1916, the collection and disposal of garbage by contract system was raised during the early part of this year, and under the assumption that the work could be done cheaper under a contract system, the Board of Works Committee called for tenders for garbage collection and disposal. The contract was awarded to the Cleansing Department, owing to the fact that the difference in the prices of the tender sent in by the department and other tenders was so small that it did not warrant changing the present system of municipal operation. The work generally has been carried out in a satisfactory manner, the one drawback being the lack of proper receptacles in some sections, although conditions in this respect are improving each year.

Nightsoil Collection and Disposal.

The collection and disposal of nightsoil has been carried out during the past year by contract. We were fortunate insomuch as the successful tenderer was the man who had been employed by the city on this work for several years past, the result being that the work has been carried out with entire satisfaction. An important change has been made during the past summer in the method of disposal, by dumping into sewer manholes instead of burying at the nuisance ground as done heretofore. The method of dumping into sewers has twice previously been tested in this city, but owing to the unsuitable wagons and flushing installations the tests were not satisfactory.

After careful consideration and a conviction that the method of dumping nightsoil into sewers was both natural and practical, two special nightsoil wagons were designed and built by the Cleansing Department, which, together with an improved flushing installation, enabled us to successfully use the sewers for disposal. Considering that the nuisance ground is now free from use for this work during the summer months, and that the length of haul to disposal site is greatly reduced, the present method is both a sanitary and economical improvement. The number of sanitary connections made was thirty-two, being the same number as in 1916, whilst four houses have been added to the collection, as against five in 1917. Three sanitary connections reduce the number of privies on sewered streets from 626 to 596.

F. K. FISHER, VISITING HEALTH NURSE.

I beg to submit herewith my report of the work done during the months of May to October, during which time I was on your staff.

Month.	No. of visits.	New babes visited.	Breast fed.	Mod. milk.	Cond. milk.	Patent foods.
May	492	135	81	42	7	5
June	482	82	69	10	.....	3
July	461	60	57	3	.....	.....
August	447	47	42	5	.....	.....
September	483	72	64	6	2	.....
October	391	62	60	2	.....	.....
	2,756	458	373	68	9	8

The total number of visits made was two thousand seven hundred and fifty-six. The total cost of the work was as follows:

Salary of nurse	$450 00
Car tickets	13 00
Total	$463 00

This makes a rate of 16.88 cents per visit.

As you know, this is the fourth summer that I have been engaged in this work. I notice that each year there is a distinct improvement in conditions.

Some of the visits listed above were made to houses in which infants had died in previous years. I visited the house investigating conditions after each death had been reported, in cases where I had not been before to see the infant. In this way one can endeavor to counteract any influence that may have been working against the infant and educate for the future.

M. E. Duncan, Superintendent Isolation Hospital.

I beg to present my report as nursing superintendent of the Isolation Hospital for the year ending October 31st, 1917.

During the year, sixty-three patients were admitted, which with the five still in from last year made a total of sixty-eight patients nursed.

Those admitted were as follows:

Scarlet Fever	47 patients
Measles	10 "
Diphtheria	3 "
Smallpox	2 "
Rubella	1 "

The number of hospital days was 1,913.

The following operations were performed:

Tympanectomy	10 cases.
Adenectomy	1 "
Mastoidectomy	3 "

There were three deaths from scarlet fever.

Accounts.

Maintenance Account	$1,670 00
Salary of Superintendent	937 50
Salary of Caretaker	505 00
Salary of Laundress	120 00
Total expense	$3,232 50
Credits:	
Collection of accounts	$207 50
Net cash	$3,025 00

Number of hospital days, 1,913.

Cost per patient per day, $1.69.

BIRTHS REGISTERED IN THE CITY OF FORT WILLIAM.

For the year ending October 31st, 1917.

——	Males.	Females.	Total.	Twins.	Triplets.
1916					
November	28	35	63		
December	30	44	74		
1917					
January	35	27	62	2	
February	26	29	55		
March	29	34	63		
April	35	41	76	1	
May	33	37	70	2	
June	35	40	75	2	
July	15	28	43		
August	30	30	60		
September	31	28	59		
October	24	18	42	2	
	351	391	742	9	

STILL BIRTHS.

——	Male.	Female.	Total.
1916			
November	.....	.....	.....
December	.....	.....	.....
1917			
January	.....	.....	.....
February	1	1	2
March	1	.....	1
April	1	3	4
May	.....	1	1
June	.....	1	1
July	1	.....	1
August	3	.....	3
September	.....	.....	.....
October	3	1	4
	10	7	17

W. E. STANLEY, SANITARY INSPECTOR.

I beg to submit herewith my annual report for the year ending October 31st, 1917.

Nuisances.

During the year the city has been under constant supervision for the detection and abatement of nuisances. The greatest we have arises from the privies. We have been somewhat tolerant in the matter, in the hope that we should be able to connect the houses with the water carriage system. However, financial difficulties intervened, and very little has been done in this direction. There appears, too, little chance of improvement and I have therefore begun to tackle this problem, and in connection with this matter notices have been served to place the privies in a sanitary condition. As there are over 1,600 privies in existence, all more or less in a dilapidated condition, it will take considerable time, which will not be lessened by the fact that most of the owners are illiterate foreigners who do not or will not understand the written notices.

The manure disposal has been fairly satisfactory, with the exception of the dairies, and all boxes are in a fair condition.

The storage of garbage before collection is far from being what it should be, owing to the lack of suitable receptacles. Until the city provides the receptacles, I cannot see much chance of improvement.

Another prolific source of nuisance is the keeping of cows and hogs, particularly in the coal docks section. I have twice made a house-to-house inspection of the district and ordered the removal of all hogs. In the case of cows, we have permitted persons to keep one, and ordered the removal of all above that number. A considerable reduction in the number of cows kept was made. However, it is all about labor in vain; as soon as you finish at one end you may commence at the other end again; they resume as soon as your back is turned.

With regard to this matter in the case of new houses and stables, it would save much time and trouble to the Health Department if the regulations were insisted upon at the time of building, and no house or stable should be certified as fit for occupation until this is done.

Fifteen hundred and sixteen inspections were made in connection with nuisances.

Five police-court prosecutions were instituted during the year.

Sewer Connections.

In this connection one hundred and eight inspections were made, and thirty-five notices served, but, as previously mentioned, work was stopped. It is to be regretted that this work is not pushed. The conditions prevailing are such as not only to be a serious menace to health, but disgusting to the sight. The number of installations made appears in the Plumbing Inspector's report.

Dairies and Cowbarns.

All dairies and cowbarns have been kept under constant supervision. Sanitary conditions have on the whole been good, athough not up to the mark required by the Provincial Medical Officer of Health. It will be my endeavor during the coming year to have these premises which come under the displeasure of the Provincial Medical Officer of Health improved without undue hardships on the owners. If it is possible to get milk clean and of a good quality under the present conditions of expensive feeding stuffs, I think it would be mistaken policy to push good men unduly and probably drive them out of business, more especially as the supply of milk is likely to be much diminished. However, there is an isolated case or two where conditions must be improved. The number of dairymen has decreased by six compared with last year, and in all probability the number will further decrease. Another pasteurizing plant has been installed during the year, making three in all. I do not attach much importance to this method of dealing with the milk in this district, as pasteurizing is only carried on during the summer months as a commercial proposition, consideration from a health point of view taking second place.

The disposal of manure is still a vexed question, and in several cases prosecutions have been taken, but there is little improvement. There is no doubt that the only way to deal with the matter is to insist upon it being removed and not turned into the river in a crude or diluted condition.

During the year I took two hundred and fifty-one samples of milk for testing.

There is still a good deal of illicit sale of milk in the north end of the city. This is a difficult matter to deal with, but by constant vigilance I have been able to diminish the practice a good deal, and the number of cows kept is not nearly so many as last year. Eight prosecutions were taken out in this connection. Three were for dirty milk and one for low fat percentage. Seven hundred and eleven inspections were made of cowbarns and dairies.

Infectious Diseases.

During the first seven months of the year measles was very prevalent, which took up a good deal of time placarding houses. With its subsidence my work relating thereto is about nil.

I made four hundred and thirty-two visits to infected houses.

Restaurants.

There has been a reduction in the number of restaurants. They are kept under constant supervision and are usually well conducted and kept in a satisfactory sanitary condition.

I prosecuted the proprietor of one restaurant for slaughtering sheep in the basement. He was fined $5.00.

Stores and Food Supplies.

All the stores dealing with food-stuffs have been regularly inspected and as a rule kept in a cleanly manner. It is a rare thing to receive a complaint. Of bad or unwholesome food, I have had occasion to condemn but a few lots of frozen potatoes.

I have weighed bread frequently, which is well up to standard weight. One baker from Port Arthur was prosecuted for light-weight bread and fined $5.00.

Seven hundred and forty-six inspections were made of the fruit and candy stores, bakeries and restaurants.

SUMMARY OF INSPECTIONS.

Bakeries.	Butcher Stores and Abattoir.	Dairies.	Candy and Fruit Stores.	Nuisances.	Communicable Diseases.	Sewer Connections.	Total.
291	1,379	711	455	1,516	432	108	4,892

Abattoir and Butcher Stores.

During the year the abattoir has been in constant operation. Owing to the severe winter, work was somewhat interfered with from January to April by the sewer being frozen.

It is worthy of notice that few cattle infected with tubercular diseases have been brought in for slaughter, and it has not been found necessary to condemn any on these grounds. Three head, however, were condemned which had died in transit. These were destroyed. Three stores have been opened at the market for the sale of fresh meats. This has been a great boon to the public, who have been enabled to get local killed fresh meat at less cost than storage meat. So great has been the success of this venture that the proprietors are opening stores in the city for the winter months.

The public are beginning to realize the advantage of fresh killed meat.

With the addition of a hide store, better facilities for the storage of offal, cement floor and other improvements which have been ordered, the abattoir will be in a much better condition of sanitation, which I hope will meet with the approval of the Provincial authorities.

SUMMARY

Date.	Cattle.	Calves.	Hogs.	Sheep.	Total.	Revenue.	Expenses.
1916							
November	67	34	16	12	129	$85 80	$69 45
December	78	14	2	.....	94	82 50	57 00
1917							
January	39	16	.....	.....	55	43 00	60 25
February	34	6	2	.....	42	36 50	82 39
March	27	20	1	.....	48	32 00	53 90
April	24	17	2	.....	43	20 25	45 00
May	32	47	50	.....	129	57 00	79 00
June	44	34	6	.....	84	55 50	56 55
July	62	47	7	.....	116	77 75	71 35
August	62	40	12	.....	114	78 50	87 15
September	76	43	5	.....	124	89 25	63 79
October	98	44	9	.....	151	114 50	77 84
	643	362	112	12	1,129	$782 55	$803 67
				Credits:			
				Overpaid Account		15 25	
				Expenses:			
				Debit balance		5 87	
						$803 67	$803 67

COMMUNICABLE DISEASES.
November, 1916—October, 1917.

Name of Disease.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Total.
Measles—													
Cases	84	40	25	40	34	29	48	30	7	1	.....	.....	338
Deaths	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
Whooping Cough—													
Cases	.....	.....	2	1	.....	.....	2	.....	.....	.....	1	4	10
Deaths	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Chickenpox—													
Cases	2	7	12	6	4	6	33	12	12	2	1	.....	97
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mumps—													
Cases	14	14	4	.....	2	3	15	27	4	.....	2	5	90
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis—													
Cases	4	.....	1	1	3	2	1	.....	1	1	.....	1	15
Deaths	2	.....	1	.....	1	1	2	3	2	.....	1	.....	13
Scarlet Fever—													
Cases	.....	3	4	1	4	3	6	5	10	16	36	22	110
Deaths	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	3
Diphtheria—													
Cases	.....	.....	2	.....	2	1	2	.....	.....	1	.....	5	13
Deaths	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Smallpox—													
Cases	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	2
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever—													
Cases	.....	1	2	1	1	.....	.....	1	1	1	1	2	11
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erysipelas—													
Cases	1	.....	.....	3	4	1	.....	2	.....	.....	1	1	13
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poliomyelitis—													
Cases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rubella—													
Cases	.....	.....	2	41	48	33	47	6	4	.....	.....	.....	181
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

CAUSE OF MORTALITY.
Infants under One Year.

Number on International List.	—	—
151	Congenital Debility, etc	40
104	Enteritis and Diarrhœa	28
91	Bronchopneumonia	5
92	Lobar Pneumonia	5
150	Congenital malformations	4
61	Meningitis	3
103	Diseases of the stomach	3
10	Influenza	2
76	Diseases of the ears	2
79	Organic diseases of the heart	2
6	Measles	1
8	Whooping Cough	1
28	Tuberculosis of the lungs	1
74	Diseases of the nervous system	1
189	Ill-defined	1
	Total	99

DEATHS.

Number on International List.			Number on International List.	
151	Congenital debility, etc.	40	64 Cerebral hemorrhage	2
104	Diarrhœa and enteritis (under two years)	32	50 Diabetes mellitus	2
79	Organic diseases of the heart	14	40 Cancer of the stomach	2
92	Lobar pneumonia	14	30 Tuberculous meningitis	2
28	Tuberculosis of the lungs	13	20 Septicemia	2
152	Other diseases of early infancy	8	6 Measles	2
91	Broncho-pneumonia	7	8 Whooping cough	1
154	Senility	6	9 Diphtheria	1
150	Congenital malformation	4	31 Abdominal tuberculosis	1
76	Diseases of the ears	4	39 Cancer of the buccal cavity	1
61	Meningitis	4	43 Cancer of the breast	1
41	Cancer of the Peritoneum, etc.	4	45 Cancer of the larynx	1
7	Scarlet fever	3	47 Acute articular rheumatism	1
10	Influenza	3	54 Anæmia	1
66	Paralysis without specified cause	3	69 Epilepsy	1
103	Other diseases of the stomach	3	74 Other diseases of the nervous system	1
120	Bright's disease	3	78 Acute endocarditis	1
175	Traumatism by other crushing	3	81 Diseases of the arteries	1
189	Ill-defined	3	84 Diseases of the lymphatic system	1
186	Other external causes	2	93 Pleurisy	1
185	Fractures	2	105 Enteritis and diarrhœa (over two years)	1
174	Traumatism by machines	2	110 Other diseases of the intestines	1
169	Accidental drowning	2	114 Biliary calculi	1
146	Diseases of the bones	2	118 Other diseases of the digestive system	1
119	Acute nephritis	2	132 Salpingitis	1
117	Simple peritonitis	2	167 Burns	1
113	Cirrhosis of the liver	2	172 Traumatism by fall	1
108	Appendicitis	2		
46	Other tumors	2		
82	Embolism and thrombosis	2		
71	Convulsions of infants	2		

GENERAL EXPENSE ACCOUNT DEPARTMENT OF HEALTH.

Salary of Medical Officer of Health		$2,108 96
Salary of Sanitary Inspector		1,475 00
Salary of Superintendent of Isolation Hospital		937 50
Salary of Stenographer		490 00
Salary of Janitor at Isolation Hospital		505 00
Salary of Laundress at Isolation Hospital		120 00
Salary of Visiting Health Nurse		450 00
Maintenance of Isolation Hospital		1,670 00
Livery and carfare		100 00
Printing and stationery		74 52
Office and laboratory equipment		15 73
Disinfectants and antitoxin		49 86
Auto service		688 99
Conventions		100 00
Ambulance		9 00
Incidentals		85 01
Abattoir		803 67
		$9,683 24
Credits:		
Revenue from Abattoir	$782 55	
Isolation collections	207 50	
Police Court fines	97 00	
Milk licenses	16 00	
Overpaid Abattoir account	15 25	
Sundries	7 95	
		1,126 25
Total net cost of Department		$8,556 99
Total per capita cost		47.53 cents.

GALT.

To the Chairman and Members of the Board of Health, Galt, Ontario.

GENTLEMEN,—In accordance with the provisions of the Ontario Public Health Act I beg herewith to submit my report for the year ending October 31st, 1917.

The great outstanding feature of this report is the fact that it shows comparatively few cases of typhoid fever as compared with other municipalities of the same size, due no doubt to the excellent water which is provided by the Water Commission and to the careful supervision of the milk supply and other sources of contamination. Yet with all our care in regard to the milk supplied to our citizens, I am not altogether satisfied with its cleanliness, believing, as I do, that it is possible to supply clean, wholesome milk free, in a great measure, from contamination, and I can assure you, gentlemen, that it is not my intention to lessen my energies along this line until the object we have in view has been accomplished, namely, the assurance to our citizens that they are being supplied with clean, wholesome, and nutritious milk up to the standard of the by-law provided by the city regarding butter fat.

During the year we have had a great deal of trouble keeping the privies clean and up to the mark from a sanitary point of view due, in a great measure, to the large number of pits, poorly constructed boxes, and to the inefficient method of keeping them clean. Hereafter we do not expect to have any more trouble with regard to the pits, as I have ordered them to be filled up and to substitute therefor dry earth closets under authority vested in me, as Medical Health Officer, by subsection 14 of section 15, Schedule B. On the other hand, I do not expect very much improvement in the method of keeping them clean until the council can see its way clear to pass a by-law making the landlords primarily responsible for keeping them clean, and to charge the cost of cleaning these boxes against the various properties, as is done in connection with the garbage system.

Regarding tuberculosis, I regret that the local medical gentlemen have not as yet complied with the regulations laid down by the Provincial Board of Health with regard to reporting cases of tuberculosis, which regulation says that wherever any legally qualified medical practitioner knows that any person whom he is called upon to visit is affected with tuberculosis he shall, within twelve hours, give notice thereof on the prescribed form to the Medical Health Officer of the municipality in which such diseased person resides.

During the months of June, July, August and September there have been reported personally about two hundred cases of whooping-cough, and I verily believe as many more not reported. You will observe, Mr. Chairman, that under the Act it is compulsory that a report should be made to the Medical Officer of Health either by the physician or a member of the family, but I suppose education is the only method by which we can reach the people and prevent this useless waste of human life from whooping cough and its complications, and to my mind the only method of education that will reach the home is to employ a visiting health nurse to visit these homes. Statistics verify the fact that, with few exceptions, all deaths from whooping cough are children under the age of two years. Therefore I know no better method of cutting down this infantile mortality than by the employment of a permanent visiting house nurse.

Notwithstanding the very primitive and unsanitary condition of the Swiss Cottage there were treated during the year in the said cottage eighty cases of measles, seventy-nine of mumps, ten of diphtheria, ten of diphtheria suspects, four of scarlet fever, and five of erysipelas, without a single death or a case of cross infection. Before leaving the subject of the number of cases treated in the Swiss Cottage, I consider that it would be unfair and unjust to the city of Galt to permit this report to go abroad without explaining the source from which these contagious diseases arose. No doubt this Board and the citizens generally know that these diseases were brought in by the 122nd Battalion, and the soldiers represented ninety per cent. of all the cases treated in the Cottage.

INFANTILE MORTALITY.

You will observe, Mr. Chairman, by the statistics given below that twenty-five per cent. of all the deaths in the city were from children under one year old and do you not think that the time is opportune for the medical profession and the public generally to investigate this question of infant mortality and see if some means could not be devised of saving this little squad of human beings.

Vital statistics show as follows:—

Deaths, including non-residents—187.
By this non-residents mean residents of other municipalities who died and whose deaths are registered in Galt.
Deaths, excluding non-residents—172.
Population—12,465.
Death rate per 1,000 (including non-residents)—15.
Death rate per 1,000 (excluding non-residents)—13.79.
Births—266.
Birth rate per 1,000—21.34.
Infant mortality in Galt—49.
Infant mortality per 1,000—3.93.

	Reported.	Deaths.
Typhoid fever	3	0
Chickenpox	10	0
Smallpox	0	0
Pulmonary tuberculosis	0	7
Poliomyelitis	0	0
Scarlet fever	5	0
Diphtheria	11	1
Measles	105	0
Whooping cough	200	3
Mumps	79	0
Erysipelas	5	0

In conclusion I may say that the relationship between the School Board Nurse and the Board has been greatly improved by the consultation between the Public School Board and your Medical Officer of Health, and whilst the relationship between these Boards has been improved I could not conclude my report without saying that the support and assistance I have received from the local Board of Health, both individually and collectively, have been all that could be desired, and that the duties involving upon the secretary and inspector have been thoroughly, impartially, and conscientiously performed.

Respectfully submitted.

J. H. Radford.
Medical Officer of Health.

Galt, December 4th, 1917.

To the Members of the Galt Board of Health.

Gentlemen,—The Chairman of the Galt Board of Health, reviewing the work of the passing year, respectfully submits the following report:—

The interesting report of your M.O.H. is eminently satisfactory. The decrease in the number of typhoid fever cases indicates a supply of pure water and wholesome milk.

The regular monthly milk tests are showing good results, not only in cleanliness, but also in the percentage of butter fat. These results have been obtained in a friendly and harmonious manner, the milk vendors at all times showing a willingness to co-operate with this board in improving the quality of their product.

The City Council, in appointing Mr. Chas. Oughton, sanitary inspector, made a wise selection. I regret we could not retain Mr. Oughton's services, as he has proved a courteous and efficient officer.

The appointment of Mr. Clunie to the position of Sanitary Inspector will, I trust, be satisfactory to you.

The Swiss Cottage was taxed to its capacity during the early months of this year owing to an epidemic of measles originating among the soldiers comprising the 122nd Battalion, stationed here during the winter of 1916-1917.

The successful treatment of these patients, along with other infectious diseases, shows wise management and efficient administration and must be gratifying to the members of the board.

A resolution, adopted by you, favoring a systematic plan *re* sewer connections to be applied to certain streets, designated by this board, as necessary to the public health of the city, is now in operation, a commencement having been made with Main Street.

The arrangements for the Child Welfare Exhibit under the auspices of the local board was successfully carried out. We appreciate the interest manifested and the assistance rendered by those who co-operated with us. The giving of prizes to the best developed and healthful children stimulated interest, and can not fail of good results.

When we consider that one child in ten dies under two years of age, it is time to ask the question: What are we doing? It is a vital question, and if by spending a few hundred dollars we can save the little ones, we should not hesitate.

In closing I wish to thank you gentlemen for the courtesy and co-operation accorded me during the year.

Respectfully yours,

JOHN H. LAIRD,
Chairman of the Board of Health.

GALT, ONTARIO, December 4th, 1917.

Dr. J. H. Radford, Medical Officer of Health, Galt, Ont.

DEAR SIR,—Please find appended certified list of deaths which occurred in the city of Galt from December 1st, 1916, to December 1st, 1917.

Yours truly,

JOSEPH MCCARTNEY,
Division Registrar,

Cellulitis	1	Appendicitis	2
Tetany	1	Artheronia of arteries	1
Old age	14	Cerebral hemorrhage	3
Pneumonia	18	Heart disease	2
Arteriosclerosis	3	Septic poisoning	2
Premature	7	Diphtheria	1
Hemorrhage of bowel	1	Paralysis agitans	1
Tumor of brain	1	Cancer of mouth	1
Otitis	1	Paralysis	2
Bright's disease	3	Heart lesion	1
Obstruction of bowels	2	Influenza	1
Apoplexy	8	Burned to death	4
Cystitis	1	Septic peritonitis	1
Injury to base of skull	1	Rheumatic endocarditis	1
Tuberculosis	2	Myocarditis	1
Accident (fell down stairs)	1	Inflammation of bladder	1
Cancer of stomach	2	Solpigitis and cystic ovaries	1
Still born	11	Congestion of lungs	3
Heart failure	4	Nephritis	2
Spinal carriers	1	Gas poisoning	1
Arteriosclerosis and clephritis	1	Whooping cough	2
Peritonitis	2	Carcinoma of liver	2
Rheumatism	1	Aortic stenosis	1
Pleurisy and disease of liver	1	Ulcer of stomach	1
Cancer	4	Uræmic convulsion	1
Cancer of bowel	1	Dropsy	1
Cholera infantum	1	Infected bladder	1
Stroke	2	Uterine fibroid	1
Pernicious anæmia	5	Septicæmia	2
Carcinoma of stomach	1	Marasmus	1
Cancer of liver	3	Chronic bronchitis	4
Mitral incompetence	2	Carcinoma	4
Broncho-pneumonia and Whooping-cough	1	Convulsions	3
		Consumption	1

Intestinal perforation	1	Bulbar paralysis	1
Tuberculosis of lungs	1	Railway accident	3
Cerebral meningitis	1	Diabetes	1
Choked by milk in tracheal	1	Ovarian cyst	1
Fibroid phthisis	1	Allulitis	1
Lympho-sarcoma of mediastin	1	Gastric ulcers	1
Pulmonary tuberculosis	1	Otitis oedera	1
Inanition	2	Congestion of liver	1
Gangrene	1	Septic meningitis	1
Eclampsia	1	Injury at birth	1
Pzloricstenosis	1	Acute phthisis	1
Phthysis pulmonalis	1		191

Certified,

JOSEPH MCCARTNEY,

Division Registrar,

HAMILTON.

JAMES ROBERTS, M.O.H.

Please find submitted report of Medical Officer of Health for statistical year beginning November 1st, 1916, and ending October 31st, 1917.

The activities of the Department in the different branches of public health work have been outlined as briefly and concisely as possible in the various reports.

The vital statistics and statistics of communicable diseases will be found in their respective tables.

At the inaugural meeting of the Board of Health for 1917, I was asked to make a short report, setting forth the requirements of the Department for the ensuing year, with the object of increasing its usefulness. The report, which in part follows, was filed for discussion at a future date.

In compliance with your request for some suggestions with a view to increasing the efficiency of the Department, it is hardly necessary to remind you of the fact that during the twelve years that I have been executive officer of the Board, the growth of the city has been phenomenal, the amount of work done increased manifold, and the whole complexion and character of the service changed, with the object of making it, wherever possible, auxiliary to the prevention of disease.

The one time conception of a Board of Health as a body of smell chasers and scientific bill posters, has, in all progressive communities at least, died and been buried forever. "The present conception of a modern health department is a body of highly trained people, who really know all about diseases they exist to prevent; who really know how to prevent them; and who really have the necessary facilities to really accomplish prevention."

Most health departments, in cities of any considerable population, are now employing nurses to visit cases of communicable disease. If trained in the work, these know how to instruct, how to give nursing assistance where necessary and to see that isolation and disinfection are properly carried out. The visiting nurse is one of the chief factors, if not the chief factor in the prevention of tuberculosis, and in addition to the one which the Health Association have asked us to provide, we might profitably, this year, employ at least one other well qualified nurse for such work as I have outlined, for housing work, child welfare work, sanitary instruction and social work. We were one of the first health boards in Canada to advocate the woman health visitor as a departure in public health service, but, because of the fact that the salary paid was insufficient to procure the properly trained nurse our efforts were discontinued.

In 1910 the Public Health Administration in Toronto employed one nurse. In 1914 there were forty-four, with a supervising nurse in charge of each of five districts. The Health Officer says: "They follow the cases to the home, study the social conditions in the homes, ascertain if there are others in the home requiring medical care; educate the

mother on home sanitation, the care of babies, the dangers of infection, the value of fresh air and sunshine. If a social problem is found, and there usually is, it is referred for its solution to the Neighborhood Workers or some other social agency."

In addition to supervising sanitary work, the Food Inspector in 1916 made 4,504 inspections of markets, restaurants, butcher shops, abattoirs, bakeries, hotel kitchens, fruit stores, dairies, dairy farms, cold storage plants, ice cream plants, candy factories, food peddlers' premises, etc.; 327 visits were made to milk dairies in the city. Nearly 1,300 samples were tested for adulteration, lack of cleanliness in milking, and for other reasons. Over 500 inspections were made of bake shops and an equal number in regard to butcher shops and restaurant kitchens, while hundreds of inspections were made of other places where all manner of foods are kept, stored or exposed for sale.

I have, on more than one occasion, pointed out that the supervision of our food supplies is quite sufficient to occupy the entire time of the inspector and assistant. With our present staff this is impossible. Both inspectors have at times to be utilized in the supervision of outbreaks of contagious diseases. The appointment of a trained sanitary inspector, at a sufficient salary to obtain a fully competent man, who would take charge of all sanitary matters and quarantine, under the direction of the Health Officer, would be a valuable assistance to the department. I would further recommend that as the requirements of the department demand, the appointment of sanitary inspectors should be made entirely with regard to qualification, and the best man possible obtained for the salary paid.

The assistance given to the department by the director of the laboratory, during the past year, has been of substantial benefit in helping us to get prompt and accurate reports of contagious cases, and in enabling the officials to secure isolation and quarantine as quickly as possible of persons liable to disseminate infection, whether in the school or in the home. The work of the laboratory should be extended in order to provide a minimum bacterial count for summer and winter of our milk supply. As yet no public health chemistry has been undertaken.

Medical inspection of schools is at the present time under the Board of Education. For reasons that will be obvious on reflection, this is a mistake. Health departments should be held responsible for conditions affecting the health of all citizens from childhood to old age. A very large part of medical inspection of schools has to do with the eradication of communicable diseases and the inspectors, deprived of the mandate of the Public Health Act, lose much of their authority in following the cases to the home. Division of responsibility is not good from an administrative or economic standpoint, and is not productive of efficiency.

One of the pressing needs of the department is adequate accommodation for minor contagious diseases. The city isolation hospital is adapted to receive and care for diphtheria and scarlet fever cases only. There is no regular accommodation for mixed cases, measles, chickenpox, whooping cough, etc. Cases of these occuring in hotels, boarding houses and public institutions, cause much trouble often, and unreasonable expense in providing for their isolation. For some time past, through the courtesy of the hospital authorities, two houses, originally intended as nurses' quarters, have been utilized in emergency. These, however, are scarcely more than sufficient to accommodate the cases which inevitably arise among the hospital population and require to be taken care of forthwith.

As shown by the monthly reports already submitted, the dental clinics of the Board —one of the most profitable investments from a public health viewpoint ever undertaken by the city, and one which will be a blessing to the rising generation—are doing excellent work. Others should be established in the north and south sections of the city as soon as the finances of the Board will permit.

The above are some of the matters which deserve consideration, if Hamilton is to hold a place among progressive cities in carrying out effective health work. With small appropriations and little trained assistance we have been able to accomplish something in the past. Typhoid fever has been called by a prominent sanitarian "the index of what a health board has been doing." In the first year in which I had charge of the health administration, the death rate from typhoid was 16.67 per 100,000 of population. Last year it was 3, as low as that of the healthiest cities in the world. There are monuments to our housing activities in every section of the city. Our sanitary inspections have increased from 4,500 in my first year of office to 25,000 per annum.

Many years ago, John Ruskin said: "Any interference which tends to reform and protect the health of the masses is viewed by them as an unwarrantable interference with their vested rights in inevitable disease and death."

Dr. Chapin, of Providence, well points out that "the education of the individual has become a most important duty. The consumptive must be taught such habits of life that he may have a fighting chance. He and his family must be taught the modes of infection and how to combat them. Parents must be taught that earache, due to adenoids, may result in permanent deafness. Much of the campaign carried on by the health department encroaches on what has been considered the domain of the practising physician, as advice to the mother on the care of infants, the directions to the consumptive, vaccination, injection of antitoxin, the examination of the eyes of school children. But these are the things that count."

It is gradually being realized that to prevent deaths from scarlet fever, measles and tuberculosis is just as important as to prevent drowning and railway accidents.

In my opinion the individual who stands aghast at the Belgian atrocities, or the sinking of hospital ships, and yet fails to be moved by the sorrow and tears that year after year are needlessly shed at the shrine of the demon of diphtheria, is touched with moral hypocrisy.

Hamilton, with its superior natural advantages, is one of the healthy cities of the continent. The aim of the Board of Health should be to have it at least the healthiest city in Canada.

The task of the Health Officer, is at best, a thankless one, but if the adverse criticism levelled at him by those whom he will not permit to endanger the lives of their neighbors, finds an ever listening ear in official circles, and if in addition he is subjected to the petty intrigue and petty vindictiveness of the narrow minded and illiterate, and at the same time receives no real encouragement from the better and more altruistic elements in the community, the evolution of the Health Department to a place of maximum usefulness I fear will be slow and painful.

Dental Clinics.

After ten years of continuous agitation, dental clinics, for the free treatment and care of school children's teeth, have been finally established in Hamilton.

The clinics have been installed under the management of the Local Board of Health, which body has received from the Municipal Council a stated appropriation for their upkeep.

The two already in existence are modern and fully equipped, one in the west end of the city in charge of Dr. W. G. Manning, the other in the east operated by Dr. H. A. Thompson.

The hours are from 9 to 12 a.m. and from 2 to 5 p.m. alternating daily, thus affording a half-day service. Record cards have been carefully prepared so that every treatment and operation performed during each child's attendance at clinic can be kept on file and referred to at any time.

Children presenting malocclusion and irregularities of the teeth are treated as far as possible at clinic, and then advised as to further treatment, as it is impossible to handle such orthodontia cases in these clinics.

Too much emphasis cannot be placed upon the necessity of early dental attention, and particularly the care of temporary teeth. When they are lost prematurely, the permanent teeth erupt into various conditions of irregularity, which greatly interfere with the growth of the bones of the head. There is also sometimes interference with the organs of respiration, resulting in a lack of normal development of the tissues of the body.

Within the last year countless teeth have been removed without justification through faulty advice being given to parents because of toothache in children. It seems to us that the rapidly growing custom of sacrificing teeth, many of which are merely suspected of being septic, cannot fail to arouse the most ardent activities of dentists against the practice. It would appear that an amazingly low estimate is being placed on the value of children's teeth by an increasing number of persons who should appreciate their importance.

The co-operation of the school nurses, school teachers and school authorities, and their valuable assistance have been greatly appreciated.

It is hoped that during the coming year funds will be forthcoming for the establishment of two additional clinics, as the present accommodation is altogether inadequate.

Following is a summary of the work completed during the year:

Total examinations	3,568
Total medicinal treatments	2,990
Total fillings	3,856
Total extractions	2,094
Miscellaneous operations	207
Completed cases	1,282
Uncompleted cases given new appointments, did not return	104

H. A. Thompson, D.D.S.
W. G. Manning, D.D.S.

Tuberculosis.

Report of Visiting Nurse.

In reviewing the work of the past years, at the down town dispensary of the sanatorium, one realizes that the nearest approach to efficiency in public health education is to be able to give directly to the persons interested, the information and help of which they stand in need.

The free dispensary for tuberculosis is one way of doing this, and there is need of close co-operation among doctors, nurses and all those interested in social service work, if we mean to accomplish anything in stamping out this dread disease.

During the year the visiting nurse's work was taken over by the Board of Health, and we feel that the change will be of inestimable value in this branch of social service.

Within the past eight months 1,077 persons have visited the dispensary and 958 examinations were made by the doctors in attendance; of these very few were found entirely free from tuberculous infection.

Of the new cases examined 136 were children under 12 years of age. In few cases was there any history given of tuberculosis in the homes, and one wonders if other peoples' carelessness outside the homes is not responsible for a great deal of infection among these little ones, viz.: spitting on the street and in the cars.

Five hundred and eight new patients have been added to our list. The different nationalities are as follows: Canadian, 277; English, 132; Scotch, 36; Irish, 9; American, 25; Rumanian, Russian, Italian, Austrian, Hungarian and Turks number 59.

There is need for the circulation of literature printed in the language of the foreigner before one can feel that much is being done towards his education. Home visiting is most unsatisfactory. Very rarely can the homekeeper understand anything in English. Usually the disease has become in an advanced stage before it is reported to a physician, and must, in the unsanitary surroundings in which some patients live, leave a great spread of infection in its wake.

Owing to the greater accommodation at the Sanatorium our waiting list is smaller than it has ever been, and advanced cases are transferred to that institution often as soon as home arrangements can be made. This will do much towards keeping tuberculosis in check, as our homes are now very much overcrowded, owing to increased rents and the general high cost of living.

One thousand one hundred and one visits were made to the homes. Some patients receive occasional visits after leaving the Sanatorium, just to keep in touch with them during the first year, while others are visited regularly. Each patient is kept in supplies, sputum boxes, handkerchiefs and medicine if necessary. Five hundred and eighty-one patients have been thus supplied.

Instruction is given as to the care of sputum, the importance of rest and proper nourishment, and advice as to cleanliness and ventilation.

The health of each member of the family is also noted.

Incipient cases are found in this way.

Old ideas regarding personal habits of life are not easily shaken. For instance, many people still have the illusion that night air is positively injurious, and insist that fresh air gives them colds. If they could but visit the preventorium of the Sanatorium, with an understanding mind, they could gain greatly in both health and happiness along this line.

The voluntary contribution has amounted to $17.15, and money from sale of thermometers amounts to $15.80. Part of this has been used for the upkeep of the dispensary.

Where people have been too poor to supply proper nourishment for their children, the Billikin Club has been a great help to these people in supplying milk, eggs and bread, where necessary. From ten to fourteen families have had help in this way through the year.

Eight hundred and fifty dollars has been drawn from Mr. Doolittle's fund and used in providing milk, oysters, and fruit for patients requiring these.

Food and Dairy Division.

Total number of inspections	4,504
Inspection of central market	188
" restaurant and lunch rooms	577
" bakeries	441
" grocery stores	162
" confectionery stores	189
" ice cream manufacturers	8
" butchers' shops	389
" fish markets	68
" sausage factories	6
" soft drink manufacturers	18
" fruit and vegetable houses	274
" slaughter houses	10
" *re* license for butcher shop	26
" candy factories	81
" fruit and vegetable pedlers' wagons	10
" *re* license for bakeries	7
" spice mills	2
" ice cream vendors' premises	18
" hide houses	7
" drug stores	12
" hotel kitchens	3
" poultry houses	14
" butter and egg stores	54
" *re* restaurant licenses	14
" barber shops	1
" city dairies	327
" dairy farms	22
" stores selling milk	6
" dairies *re* disease	1
" creameries	7
" ice cream cone factories	8
Number of sediment tests made	160
" bacterial counts made of milk	13
" milk samples collected and tested	1,287
" milk samples tested and found below city standard	50
" inspections of milk wagons	101
" inspections *re* selling milk without license	11
" inspections for milk license	38
" cream samples collected and tested	12
" milk licenses refused	5
No. times potatoes weighed	5
" times bread weighed	91
" times butter weighed	15
" inspections of cars *re* potatoes	5
" inspections *re* ice cream tents	10
" complaints investigated *re* food	24
" times attendance at court	24
" summons issued	26

Notices Were Served as Follows:

Notice to clean candy kitchen	4
" " bake shop	5
" " hide houses	1
" " milk dairies	9
" " milk wagons	9
" " grocery stores	2
" " restaurant	80
" " butcher shops	109
" " fruit and vegetable stores	5
" " confectionery stores	2
" " fish stores	2
" " cows	6
" " farmers' milk wagons	4
" " barnyard	5

Notice to clean milk bottles	3
" " ice box	5
" " candy factories	1
" *re* bad potatoes	1
" to take out milk license	22
" *re* butcher license	6
" to cover fruit	68
" *re* unsanitary premises	10
" to whitewash cow stable	17
" discontinue selling milk	7
" discontinue selling ice cream	5
" repair floors in dairies	3
" provide screens	15
" discontinue bread making	2
" remove beds from restaurant	2
" *re* ice cream test	1
" cream test	5
" milk test	59
" to discontinue using roller towels	2
" *re* butcher license	6

Seizures.

Lbs. of beef	4,012
Lbs. of pork	537
Lbs. of veal	325
Number of fowl	8
Lbs. butter	22
Loaves bread	838
Dozen eggs	40
Number gallons cream	8
Lbs. sugar	100
Baskets peaches	2
Baskets apples	10

Prosecutions, 1917.

	No.	Amount Fines
For keeping unsanitary premises	1	suspended
" adulterating milk	5	$165 00
" selling milk without license	2	30 00
" keeping unsanitary butcher shop	1	15 00
" keeping unsanitary restaurant and lunch room	2	25 00
" offering for sale light weight bread	5	25 00
" offering for sale light weight butter	4	30 00
" offering for sale faced apples	1	20 00
" offering for sale faced peaches	1	13 00
		$323 00

Report of Sanitary Inspectors.

To the Chairman and Members of the Local Board of Health.

Gentlemen,—

Below please find synopsis of work done by the sanitary inspectors from November 1st, 1916 to October 31st, 1917.

Total inspections	21,023
No. re-inspections	4,218
No. notices served	4,524
No. inspections *re* accumulation of rubbish and refuse	1,971
" " accumulation of manure	444
" " unsanitary and overcrowded premises	1,471
" " unsanitary and defective water closets	997
" " defective sewer connections	532
" " defective eave troughs	77
" " defective sink waste pipe	72
" " defective plumbing	48
" " defective roofing on houses	63
" " nuisance caused by fowl on premises	573

No. inspections *re* nuisance, animals on premises	121
" " offensive garbage utensils	229
" " offensive privy vaults and d. e. closets	275
" " offensive garbage dumps	18
" " unsanitary basements and cellars	440
" " disposal waste water	65
" " water on lots	239
" " census for sewer connections	126
" " house to house	1,630
" " vacant houses	538
" " supplying tenants with water	98
" " providing sanitary conveniences for workmen	12
" " smoke nuisance	9
" " offensive odors	66
" " cesspools	6
" " of premises found O.K.	3,182
" " laundries	461
" " schools	27
" " junk yards	14
" " street cars	145
" " stables	319
" " stables located	15
" " alleys	383
" " *re* ice houses	114
" " hotel and public lavatories	34
" " manure bins not covered	237
" of water closets installed	37
" complaints unfounded	19
" wrong numbers given, occupants not in	357
" miscellaneous calls	176
Visits *re* "dog biting cases"	21

Notices Were Served as Follows:

Notice to clean and repair premises	895
" clean cellars and basements	148
" clean alleys	243
" clean laundries	137
" clean stables	113
" clean chicken coops	36
" clean and repair water closets	257
" clean privy vaults and d. e. closets	59
" repair defective roofs	11
" repair defective sewer connections	129
" repair defective plumbing	37
" repair eave troughs	23
" remove rubbish and refuse	859
" remove accumulations of manure	206
" remove fowl from premises	65
" remove fowl required distance	68
" remove animals from premises	29
" provide proper water supply for tenants	30
" provide proper ventilation	6
" sanitary conveniences for workmen	10
" manure bins	15
" provide d. e. closets	3
" abolish privy vaults and d. e. closets and intall water closets	132
" abate nuisance caused by water on lots	46
" lock up fowl	163
" cover manure bin	117
" provide sewer, cement floor and manure bin in stable	39
" vacate stable	3
" vacate premises	15
" *re* offensive garbage utensils	224
" unsanitary and overcrowded premises	202
" disposal waste water	39
" water in cellar	2
" offensive dumps	12
" offensive odors	15
" offensive junk yards	5
" smoke nuisance	2

Number miscellaneous notices served	32

Summary of Work Done by the Inspectors in Quarantine and Disinfection.

Houses placarded for Scarlet Fever	17
" " " Diphtheria	43
" " " Measles	1,343
Houses disinfected for Scarlet Fever—patients sent to hospital	30
" " " Diphtheria—patients sent to hospital	176
" " " Poliomyelitis—patient sent to hospital	1
" " " Scarlet Fever—cards removed	20
" " " Diphtheria—cards removed	45
" " " Poliomyelitis	5
" " " Tuberculosis	55
" " " Erysipelas	13
" " " Meningitis	1
" " " Typhoid Fever	10
Clothing disinfected for Scarlet Fever	2
Measles cards removed	1,206
Visits *re* quarantine and isolation	1,683

CITY LABORATORIES.

Examinations for Diphtheria Bacilli.

Month.	Positive.	Negative.	Total.
1916			
November	129	552	681
December	69	395	464
1917			
January	84	394	478
February	57	348	405
March	49	334	383
April	20	226	246
May	28	305	333
June	63	329	392
July	21	225	246
August	16	383	399
September	9	164	173
October	18	258	276
Total	563	3,913	4,476

BACTERIOLOGICAL REPORT OF WATER.

Daily Average.

Month.	Tubes with gas.	Tubes without gas.	Count per C.C. 37%
1916			
November	.....	5	5
December	.....	5	6
1917			
January	2	5	6
February	2	4	6
March	1	5	5
April	2	4	5
May	.....	5	5
June	.....	5	5
July	1	5	7
August	.....	5	7
September	1	5	8
October	.....	5	6

Standard Methods.

Five ten cc. gas tubes and ÷ 10 plain agar—incubated at 37°c. Gas in two or more 10cc. amounts and count of over 100 per cc. shows water unsafe.

EXAMINATIONS OF BLOOD FOR WIDAL REACTION.

Month.	Positive.	Negative.	Total.
1916			
November	6	3	9
December	3	6	9
1917			
January	5	11	16
February	1	2	3
March	9	11	20
April	2	8	10
May	.....	6	6
June	4	7	11
July	3	15	18
August	4	20	24
September	2	12	14
October	.....	8	8
Total	39	109	148

*Includes examinations for points outside city.

EXAMINATIONS OF SPUTUM FOR TUBERCLE BACILLI.

Month.	Positive.	Negative.	Total.
1916			
November	4	33	37
December	6	38	44
1917			
January	2	62	64
February	12	41	53
March	6	49	55
April	3	35	38
May	3	43	46
June	6	25	31
July	3	28	31
August	5	16	21
September	6	24	30
October	3	28	31
Total	59	422	481

VITAL STATISTICS.

	1915.		1916.		1917.	
	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
November	239	106	220	112	230	92
December	231	135	240	110	261	106
January	236	92	242	162	255	121
February	243	99	243	136	197	98
March	284	119	271	138	290	147
April	231	114	229	133	232	134
May	248	104	242	97	224	118
June	231	72	233	96	235	125
July	241	118	291	98	220	107
August	239	147	244	117	240	98
September	230	118	221	112	232	110
October	243	117	233	111	264	114
Total	2,896	1,341	2,909	1,422	2,880	1,370

COMPARATIVE TABLE.

Showing number of deaths during 1917, 1916 and 1915 within the following age periods.

	1917		1916		1915	
	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	239	183	266	194	257	182
From 1 to 5 years	27	35	31	45	45	44
From 5 to 10 years	12	22	20	7	7	10
From 10 to 20 years	29	19	24	15	17	15
From 20 to 30 years	34	41	37	35	44	36
From 30 to 40 years	55	48	63	57	40	39
From 40 to 50 years	56	43	61	55	39	37
From 50 to 60 years	56	64	66	55	61	81
From 60 to 70 years	93	63	77	63	70	61
From 70 to 80 years	69	81	73	82	72	86
From 80 to 90 years	42	44	37	47	33	42
From 90 to 100 years	7	6	5	7	8	13
Ages not given	1	1	.....	.....	2	.....
	720	650	760	662	695	646

COMPARATIVE TABLE.

Showing Causes of Death in Early Infancy, Exclusive of Prematurity.

Under One Year.

	1917	1916	1915
Gastritis	3	7	11
Malnutrition	12	21	17
Inanition	21	16	28
Marasmus	35	26	20
Cholera Infantum	14	38	20
Intestinal Obstruction	3	6	2
Congenital Pyloric Obstruction	..	1	..
Gastro Enteritis	12	26	25

	1917	1916	1915
Enteritis	2	7	4
Ileo Colitis	1	3	4
Convulsions (Gastritis)	15	18	22
Stomatitis	1	..	2
Nephritis	1	5	3
Icterus Neonatorum	..	4	2
Congenital Heart	3	4	11
Spina Bifida	1	1	5
Omphalitis	..	..	1
Syphilis	2	5	3
Hydrocephalus	2	..	1
Asphyxia Neonatorum	1	..	..
Patent Foramen Ovale	6	3	3
Injury at Birth	4	..	..
Meningitis	6	6	6
Meningeal Haemorrhage	1	4	4
Pernicious Anaemia	1	..	..
Strangulated Hernia	..	1	..
Status Lymphaticus	..	1	..
Congenital Stenosis	..	1	..
Cellulitis	..	..	1
Carcinoma (Kidney)	..	1	..
Jaundice	..	1	..
Hemiplegia	..	..	1
Broncho Pneumonia	20	20	20
Bronchitis	7	4	6
Pneumonia	23	13	25
Lobar Pneumonia	..	1	..
Pleurisy	..	1	..
Pulmonary Oedema	..	1	..
Diphtheria	4	3	5
Measles	1	5	5
Tubercular Meningitis	1	1	1
Tuberculosis of the Intestines	2	..	..
Suffocation	3	..	2
Empyema	..	1	..
Erysipelas	1	7	..
Septicaemia	2	1	..
Heart Failure	7	..	..
Haemorrhage	9	..	..
Whooping Cough	3	1	5
Natural Causes	2	..	1
Cause not known	..	1	..
Accidental injuries	..	1	..
One to Two Years.			
Meningitis	1	4	1
Broncho Pneumonia	6	6	6
Pneumonia	8	8	6
Congenital Heart	..	1	..
Gastro Enteritis	1	4	6
Whooping Cough	1	4	2
Convulsions	5	5	1
Nephritis	..	..	1
Bronchitis	..	..	2
Marasmus	3	2	3
Intestinal Obstruction	..	..	2
Intestinal Infection	..	..	2
Cholera Infantum	3	2	2
Malnutrition	1	..	..
Cerebro Spinal Meningitis	..	..	1
Hydrocephalus	1	..	1
Rickets	1	..	..
Pharyngeal Abscess	..	1	..
Status Lymphaticus	..	1	..
Toxemia	2	..	..
Empyema	1	..	..
Ileo Colitis	..	4	..

	1917	1916	1915
Diphtheria	1	2	2
Measles	3	2	7
Volvulus	..	1	..
Erysipelas	1	..	..
Tubercular Meningitis	..	1	..
Tuberculosis	..	1	..
Burns	2	1	4
Accidental Injuries	2	..	2
Cause not known	1	..	..

COMPARATIVE TABLE.

Showing cases of Typhoid Fever reported for the past twenty-five years.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total.	Deaths.
1892-1893....	11	5	7	5	4	2	2	1	.....	3	13	13	66	6
1893-1894....	23	11	4	2	3	4	.....	1	10	14	29	19	120	12
1894-1895....	3	3	5	5	3	.....	2	6	4	15	17	31	94	7
1895-1896....	13	8	25	7	8	2	4	3	14	13	14	8	119	15
1896-1897....	8	3	2	2	1	2	.....	2	1	5	11	6	41	5
1897-1898....	2	11	2	2	4	1	.....	1	1	4	6	3	37	6
1898-1899....	3	1	1	....	1	3	1	.....	5	26	21	12	74	13
1899-1900....	5	2	....	1	2	1	2	1	1	10	28	8	61	12
1900-1901....	12	5	1	....	.....	.....	.....	2	2	13	12	11	58	10
1901-1902....	3	2	1	1	2	1	.....	4	2	17	29	3	65	7
1902-1903....	5	1	2	3	1	1	1	.....	.....	13	9	17	53	6
1903-1904....	16	5	3	....	.....	3	1	20	19	12	17	7	103	7
1904-1905....	6	11	3	....	.....	1	3	1	2	7	8	6	48	8
1905-1906....	7	4	1	3	.....	1	.....	2	2	6	52	47	125	20
1906-1907....	12	1	1	2	.....	1	.....	4	1	8	15	8	53	11
1907-1908....	2	4	....	1	.....	.....	.....	2	6	11	13	4	43	10
1908-1909....	7	....	....	....	3	.....	.....	3	4	6	27	8	58	6
1909-1910....	8	1	1	2	1	.....	.....	.....	2	17	27	21	80	12
x1910-1911....	2	1	....	3	3	.....	.....	6	4	2	11	10	42	9
x1911-1912....	3	1	3	1	1	.....	2	.....	1	4	5	6	27	8
x1912-1913....	2	1	1	....	.....	1	.....	2	3	29	21	6	66	10
x1913-1914....	4	....	....	1	1	.....	1	.....	.....	9	5	11	32	9
x1914-1915....	1	2	1	1	1	.....	.....	.....	1	.....	2	1	10	7
x1915-1916....	3	1	1	1	.....	.....	.....	.....	.....	1	7	2	16	3
x1916-1917....	....	1	....	4	.....	.....	.....	.....	.....	3	1	3	12	4

xCases infected outside city not included.

KINGSTON.

DR. A. R. B. WILLIAMSON, M.O.H.

The year that has just closed has on the whole been uneventful, though marked by some advances from the view-point of public health.

The City Council last spring appointed Dr. G. W. Bell, V.S., Milk Inspector, under the provisions of the Milk By-law passed some months before. Dr. Bell has taken complete charge of this important work and is endeavouring to secure for us a milk supply of such quality as will conform with the present-day ideas of what is necessary in this respect. Patience on the part of the public as well as on the part of the Inspector will be necessary, as the available supply of milk in this district is not abundant; is is just sufficient to meet the demands with little or no surplus, and under these circumstances a campaign of education rather than a drastic enforcement of regulations is preferable, and it is along these lines that the inspector is working.

As I have pointed out on previous occasions, we still have a number of dwellings that are far from what they should be from a sanitary point of view. An effort has been made to improve conditions, but with the high cost of material, scarcity of labour and actual shortage of household accommodation not very much can be accomplished until the war is over.

The inspection of schools by Miss McCallum is of the greatest value both to the school children themselves and to the community at large. Those with defects are made aware of the same and advised to seek proper treatment, and on the other hand the beginnings of possible outbreaks of infectious diseases are often brought to light and the trouble stamped out before it becomes a danger to the community.

During the year several sewer and water extensions have been made and the number of houses without sanitary fixtures have been reduced almost to the vanishing point. But, as has often been pointed out, sanitary improvement along these lines is increasing our danger of infection from our water supply. As long as sewage is poured untreated into the great lakes and rivers, the sources of water supply for domestic uses, our danger from typhoid and other allied intestinal infections will be a very real and increasing danger. It is true that by chemical treatment such as chlorination the danger can be combated up to a certain point, but as the amount of pollution varies greatly from day to day, even from hour to hour, there are times when chlorination at a fixed rate is insufficient to overcome the contamination. Just now we have a few cases of typhoid cropping up, following the recent stormy weather, and until we adopt more enlightened methods of sewage disposal this menace will be ever present.

KITCHENER.

DR. J. MCGILLAWEE, M.O.H.

I beg to submit to you the Annual Health Report for the City of Kitchener for the year ending November 30th, 1917.

The general health of the city has been, on the whole, good.

There were 219 deaths registered during the year.

In 38 of these the cause was reported as premature birth.

There were 14 deaths from different forms of tuberculosis.

There were 11 deaths from cancer.

There was one case of typhoid, which ended fatally. In this case it was impossible to trace the origin of the disease.

There were 47 cases of diphtheria. Of these 33 were treated in the Isolation Hospital. Two deaths from diphtheria.

One death from whooping cough.

There were a number of cases of German measles and mumps, both of a light type—no deaths.

One case of scarlet fever. Origin obscure.

The water supply has been good, both as to quantity and quality.

The milk tests have been good considering that the standard of the quality of milk has been raised this year.

Slaughterhouses and dairies have been inspected, and in several cases needed improvements have been made.

The work of both the School Nurse and Sanitary Inspector has been especially satisfactory.

NIAGARA FALLS, ONT., March 26th, 1918.

I beg leave to submit a report of the Municipality of the City of Niagara Falls for the year 1917.

This city has been pretty much free of any contagious diseases during the year 1917. We have had a few cases of scarlet fever and measles; also possibly a half dozen cases of diphtheria.

Since we put in the chlorination plant we have been almost entirely free from typhoid fever. We use a very small percentage of chlorine in the winter, but in the spring and autumn increase the amount by one-third. We have the water tested frequently and find it very pure considering the source from which we get our water supply.

We find general satisfaction from our school nurse. All cases of rash, sore throat, sore mouth, ringworm, etc., are sent home from school for treatment. If too poor to pay, the Medical Health Officer treats them freely without charge. They are not allowed back to school until they get a certificate of health from the Medical Health Officer.

I have the honour to be your obedient servant,

H. LOGAN.

NIAGARA FALLS, ONTARIO, December 15, 1918.

To the Mayor and Council of the City of Niagara Falls, Ontario.

Gentlemen,—As Chairman of the Local Board of Health I beg to submit herewith my Annual Report for the year 1917.

On April 1st the usual notices for residents to clean up their premises were printed and distributed and I am pleased to report that the order was very well respected, and after a careful inspection of the city, very few premises were found in an untidy or unsanitary condition.

The custom of letting the contract for the collection of garbage was found to be unsatisfactory and complaints were continually coming in that collections were not made at many houses and that garbage was allowed to stand in some cases for weeks at a time. This system has now been done away with, the city having purchased its own horses, wagons, etc., and engaged men to collect and dispose of all refuse and garbage. This insures us of a house to house collection at least once a week, and from hotels and restaurants and boarding houses twice a week, or oftener if weather conditions require it. This is found to work out very satisfactorily.

The public lavatories along the line of the various railways and other public institutions have been regularly inspected, and whenever any complaints have been made, immediate action has been taken to remedy the trouble.

Outside lavatories for private residences wherever within 150 feet of sanitary sewers, have now all been done away with, and only in low lying sections where sanitary sewers cannot be constructed do such lavatories exist.

No orders for the construction of sanitary sewers were passed during the year and no applications were received.

The water supply has been tested at regular intervals and the reports found to be very satisfactory.

The milk supply is produced on farms within a radius of six miles of the city in most part, but at certain seasons it is very scarce and is brought in from Hamilton and as far west as Aylmer.

We have five licensed dealers delivering milk in the city, two of which pasteurize and possibly supply three-quarters of the total amount delivered. In all about three thousand (3,000) quarts are delivered each day.

In the majority of cases on the farms the milk is handled in a satisfactory manner; in other cases farmers are careless as to sanitary measures; cooling the milk properly before delivering is probably the greatest neglected measure.

Twice a year cows are inspected; stabling and care of milk by farmers are also looked into. Dairies are also inspected from time to time and milk tested frequently.

Respectfully submitted.

C. V. BRADFORD,

Chairman.

OTTAWA.

ROBERT LAW, ACTING MEDICAL OFFICER OF HEALTH.

In the absence of Dr. Lomer, Medical Officer of Health, now overseas, I herewith present report of the Health Department for the year ending October 31st, 1917.

In doing so I am glad to state that this year is one of the best in the annals of the Department, a cause for congratulation to the members and officials of the Board.

Since the year 1901, when I first became associated with the Department, Ottawa has been true to her motto, having *advanced* in many ways, but in none more so than in the state of her public health, and improved living conditions generally. This period has witnessed the formation of a Health Department and the provision of Hospitals for acute infectious diseases, and also through the energy and munificence of many of our public-spirited citizens the provision of the Royal Ottawa Sanitorium for the treatment of tuberculosis, which with the May Court Club Dispensary and the Visiting Nurse of the Ottawa Antituberculosis Association have been largely instrumental in cutting the death rate from tuberculosis practically in two.

The Civic Isolation Hospital has done wonderful work since its opening—the death rate from diseases treated there being but one-sixth of what it was in 1901.

The efforts of the educational work in regard to the care of children through the Milk Stations has resulted in a marked decline in infantile mortality.

The provision of Dental Clinics and the school Nurses have also been extremely helpful means towards bettering health of children.

Improvements in water supply, sewerage, garbage collection system, have all contributed markedly towards "CIVIC ADVANCE."

The most striking result of the many civic improvements is that the death rate has declined in these few years 5.34 per thousand; this represents a saving of 541 lives in Ottawa this year and is certainly ample return for the effort and outlay on the various factors concerned, and should be an incentive to still greater efforts on your part and continued co-operation and support by the Public, so that the Department with which we are more especially charged may still keep up with "CIVIC ADVANCE."

It is with most sincere regret that I record the loss sustained by the Department in the death of our Plumbing Inspector, James N. Jacques, who had been with the Department for ten years past. His long experience as a practical plumber had well fitted him for the post, which he had filled fairly and fearlessly in the public interest.

I attach herewith various tables and the reports of the sub-departments.

The estimated population is		101,549
Total number of births for 1917		2,449
Birth rate, 1917	24.20	per 1,000
" 1916	25.20	"
" 1915	26.83	"
" 1914	24.92	"
" 1913	26.38	"
Total deaths for 1917		1,734
Stillbirths		161
Deaths of non-residents		183
Corrected death rate for 1917	13.72	per 1,000
" " 1916	15.34	"
" " 1915	14.31	"
" " 1914	15.26	"
" " 1913	15.28	"

The death rate from pulmonary tuberculosis, deducting non-residents, is but one per 1,000. Though this is still a sad toll, it is encouraging to those engaged in the fight against it to know that this is but one-half what it was a few years ago, and encourages us to work for still greater improvements in the near future.

Diphtheria.

The diphtheria situation again shows improvement, there being six deaths less than last year.

The 26 deaths which have occurred are in almost every instance more preferably chargeable to neglect in securing proper treatment in time. With the prompt use of antitoxin a death from diphtheria should be a rarity. Ottawa is not unique in this matter, as nearly all other cities show the same needless deaths.

It is most unjustifiable for anyone to treat sore throats, or croupy conditions, without advice of physician.

Lack of means is no excuse, as the Department will see to any unable to pay.

Considerable work has been done recently in newer methods of immunizing children against diphtheria, which may prove of great assistance.

Cancer.

The various forms of cancer have been responsible for 103 deaths, almost as many as tuberculosis.

Many of these might have been saved had proper treatment been secured in time. Do not waste time with the fake cancer cures.

Any irritation or injury predisposes to formation,—as, for example, cancer of the lip, tongue or throat may be caused through excessive smoking, jagged teeth, etc.

Those over forty are most liable, and should have any abnormal growth or non-healing sore seen to at once.

Women should pay special attention to tumours of breast and irregular hemorrhages occurring after the "change of life."

Typhoid Fever.

Ottawa has enjoyed almost complete immunity from typhoid. Out of the five deaths recorded, four were from outside the city. This is a striking testimony to the condition of our water supply and the generally sanitary condition of our city.

Scarlet Fever.

Scarlet fever, from which we were almost free last year, shows 245 cases reported, with eleven deaths.

Anterior Poliomyelitis. . .

This disease, popularly termed infantile paralysis, and after the New York epidemic of 1916 with its mortality of twenty per cent. such a source of terror to parents, appeared here this summer, but fortunately in a mild form, there being but 18 cases reported, only one of whom died, and the great majority of the remainder show but little injury from their attack.

Child Welfare Work.

The results of this work in this Branch of our Department have been most encouraging.

The "Better Baby Contest," carried out under the auspices of the Pure Food Show at the Exhibition this year, shows the increasing interest being aroused in these matters among the public. The thanks of the public are due to these gentlemen and ladies of the Victorian Order who co-operated to make it a success and to whom is due the honour of inaugurating in Ottawa this year this excellent means of advertising the importance of saving the BABY.

The total deaths of children under one year of age were 398, as compared with 566 last year, a decline of 168. If we deduct from this the 94 children dying at the Misericordia, the great majority of whom come from outside the city, it leaves us with a total of 304 chargeable to the mothers of the Capital, or a rate of 124 per thousand births registered. As in spite of all efforts a certain percentage of births are not registered, the actual rate per thousand births must be less even than this.

The thanks of the Board are due to the physicians who have kindly assisted at the clinics throughout the year, and to Miss Davidson and her nurses, who are to be congratulated on the great improvement shown this year and to be encouraged thereby to strive for still greater success next year.

In conclusion, I beg to testify to the faithful work of the staff and to thank you, Gentlemen, for your co-operation in the interests of public health in our city.

COMMUNICABLE DISEASES REPORTED FOR 1917, ALSO NUMBER OF DEATHS.

Disease.	November.	December.	January.	February.	March.	April.	May.	June.	July	August.	September.	October.	Total.	Deaths.	Of these the following number were from outside.
Pulmonary Tuberculosis....	14	4	7	10	6	10	8	5	6	4	15	14	103	113	8
Other forms of Tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	1
Typhoid Fever.....	3	4	3	1	1	1	2	1	1	2	5	3	27	5	4
Scarlet Fever	13	9	11	11	44	27	52	26	14	3	11	24	245	11	3
Diphtheria	48	55	41	30	25	34	32	34	31	25	39	39	433	26	
Smallpox.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	2	.....	
Measles.....	29	54	70	37	86	101	26	8	1	1	2	3	418	11	
German Measles.....	3	3	3	5	4	26	10	7	.....	.....	.....	1	62	.....	
Chickenpox.....	32	8	8	8	9	7	8	7	13	.....	1	3	110	.....	
Mumps	.....	.....	1	.....	2	1	2	1	1	.....	.....	.....	8	.....	
Whooping Cough.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	4	6	
Erysipelas	.....	1	.....	.....	2	1	.....	.....	.....	.....	.....	.....	4	5	
Poliomyelitis.....	.....	.....	.....	.....	.....	.....	.....	.....	5	5	5	3	18	1	
													1431	198	

DEATHS FROM TUBERCULOSIS BY WARDS, 1917.

Ward.	Pulmonary Tuberculosis.	Other Cases.	Total.
Rideau	3	.....	3
Ottawa	14	1	15
By	15	1	16
St. George's	11	1	12
Wellington	13	3	16
Central	8	4	12
Dalhousie	22	2	24
Capital	16	1	17
Victoria	3	1	4
Outside Cases	8	3	11
Totals	113	17	130

DEATHS FOR 1917 BY WARDS.

Wards.	Population.	1916.	1917										
		Nov.	Dec.	Jan.	Feb.	Mar	Apl.	May	June	July	Aug.	Sept.	Oct.	Total.
Rideau	3,539	3	4	3	2	3	3	2	6	3	2	3	4	38
Ottawa	9,587	11	15	16	16	15	13	16	23	15	16	24	12	192
By	7,838	7	13	17	14	15	15	17	13	11	15	15	15	167
St. George	13,329	15	12	16	12	13	16	10	11	11	9	16	12	153
Central	12,710	10	16	13	14	17	16	11	9	13	12	9	20	160
Capital	14,988	10	12	15	15	18	25	21	17	15	17	12	16	193
Wellington	13,406	15	25	25	16	28	16	21	18	16	18	19	19	236
Dalhousie	19,054	26	21	27	26	27	29	23	19	14	22	26	32	292
Victoria	7,098	13	21	9	14	8	8	12	10	10	10	5	3	123
Outside	.....	15	21	14	14	15	15	13	17	12	11	18	18	183
Totals	101,549	125	160	155	143	159	156	146	143	120	132	147	151	1,737

Note.—Ottawa Ward includes St. Charles Home which has 44 deaths.

DEATHS BY NATIONALITY.

Canadians	1,469	Germans	4
English	85	Dutch	1
Irish	77	Italians	6
Scotch	33	South Africa	2
Roumanian	1	Russians	12
Americans	18	Maltese	1
Australian	1	Parisians	2
Austrians	14	Swiss	3
Assyrians	2	Norwegian	1
Chinese	3	Danes	1
Jamaicans	1		1,737

Of the above there were 914 males and 823 females.

MORTALITY IN DIFFERENT INSTITUTIONS IN THE CITY.

Ottawa Maternity Hospital	14
Salvation Army Rescue Home	3
County Carleton Protestant General Hospital	92
Lady Grey Hospital	51
St. Luke's General Hospital	75

Water Street General Hospital	122
Misericordia Hospital	0
Misericordia Infants' Home	94
St. Patrick's Home	18
St. Charles Home	44
Old Men's Home	5
Perley Memorial Home	11

NUMBER OF DEATHS BY MONTHS, WITH AGES.

Age.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total.
Under 6 months.	22	30	29	15	23	23	24	22	19	34	41	30	312
6 months to 1 year	7	8	8	9	7	5	8	4	3	13	8	8	86
1 to 2 years....	7	10	8	6	.....	6	5	6	4	2	11	1	66
2 to 5 "	7	8	7	2	8	5	4	3	3	3	2	2	54
5 to 10 "	1	4	3	1	5	2	4	2	3	4	2	7	38
10 to 15 "	.....	3	1	3	3	5	5	3	1	.....	2	1	27
15 to 20 "	4	7	5	5	4	3	5	5	6	2	1	3	50
20 to 25 "	2	5	3	1	5	5	4	4	6	3	4	2	44
25 to 30 "	9	5	8	2	6	5	5	7	1	2	2	2	54
30 to 35 "	4	9	5	5	4	5	4	6	5	1	4	5	57
35 to 40 "	3	7	4	2	3	4	4	3	4	5	3	4	46
40 to 45 "	2	6	4	3	4	6	4	9	4	6	5	4	57
45 to 50 "	5	8	7	6	7	6	4	8	6	7	5	8	77
50 to 55 "	2	9	5	6	5	5	6	9	8	8	3	6	72
55 to 60 "	4	2	3	7	6	7	8	9	3	6	7	12	74
60 to 65 "	8	1	9	6	5	8	6	4	6	5	8	8	74
65 to 70 "	8	9	7	4	8	9	7	6	4	5	10	5	82
70 to 75 "	7	9	9	12	10	9	10	12	6	9	6	5	104
75 to 80 "	6	2	7	10	8	5	9	5	8	3	8	8	79
80 to 90 "	4	2	7	13	14	12	12	5	8	2	5	12	96
90 up.....	.....	2	3	5	4	5	1	.....	4	.....	2	1	27
Stillbirths.....	13	14	13	20	20	16	7	11	8	12	8	19	161
Totals.....	125	160	155	143	159	156	146	143	120	132	147	151	1,737

JOSEPH RACE, CITY BACTERIOLOGIST AND CHEMIST.

I have the honour to submit to you my report upon the work performed in the Civic Laboratories during the year ending October 31st, 1917.

During the year a total of 10,674 samples has been received and examined: this is a slight reduction on the number examined during the previous year and is due to a decrease in the number of swabs received for examination for diphtheria.

Water.

The usual tables showing the chemical, bacteriological and physical condition of the raw and treated water have been prepared in the standard form adopted by the New England Waterworks Association and may be obtained from me by those interested in this data.

The condition of the raw river was generally favourable for chlorination: during the spring floods the river water was augmented by surface soil washings, but these were satisfactorily treated by the chloramine process which had been installed a few months previously.

Since the end of the statistical year the old system of water supply has been abandoned and the new pumping station and overland pipes have been placed in operation. *This system absolutely precludes all possibility of contamination of the water after treatment at the pumping station at Lemieux Island, and guarantees a supply of safe water to the consumers.*

The bacteriological condition of the tap supply has been satisfactory at all times and an ample margin of safety has been provided. This is corroborated by the number of cases of typhoid reported during the year: 1915, total cases, 111; 1916, 55; 1917, 27. Deducting the outside cases, i.e., cases in which there is definite information that the disease was contracted outside the city, the number is the same as last year, viz., 12; but the deaths have been reduced from 4 to 1. This single death from the city is one of doubtful diagnosis.

This rate of 1 per 100,000 places Ottawa in the front rank of all the cities in the world.

Continuing the table given in last year's report as to the monetary value represented by the reduction in typhoid since my appointment in 1912, the following figures are obtained:

Year.	Cases.	Deaths.	Value of loss of vital energy.
1912	1,300	84	$660,000
1913	90	14	75,000
1914	86	9	56,000
1915	47	12	56,000
1916	12	4	18,100
1917	12	1	6,900

The loss represented by the cases and deaths in the pre-epidemic years would average about $100,000 per annum. Last year the loss was $7,000, or a reduction of over $90,000, and the water treatment cost approximately $18,000 per annum (including laboratory service). *These figures show that the treatment has been an excellent business proposition to the citizens of Ottawa.*

In February the chloramine process, as worked out in your laboratories, was installed on the main plant and has been operated continuously and successfully ever since. The reduction in the amount of hypochlorite used represents a saving of over $3,000, and owing to this and other factors I anticipate that the cost of treatment for 1918 will be the lowest since chlorination was commenced.

My chloramine process has been installed at Denver, Colo., and I have recently heard that the New York City water department proposes to use it for treating a polluted stream discharging into Croton Lake.

This matter is mentioned because an effort has been made at various times to both increase the routine work of the laboratories and to reduce the staff. This would have prevented such experimental work being performed as has led to the economies mentioned above. I cannot emphasize too strongly the fact that properly equipped and staffed laboratories are a paying concern and that the provision of facilities for research work is good business. Inadequate recognition of this in the past has led to Canadian scientists crossing the border to the South, where their services are more appreciated and where they have assisted in building up industries which would otherwise have been developed in this country.

Wells.

Now that the overland pipe scheme is in operation I believe that more stringent action should be taken regarding the polluted wells. I would recommend that the well by-law be amended so as to facilitate such a policy. Wells that are either constantly or intermittently polluted should be permanently closed, because they are a danger, not only to the users, but to the whole community. The by-law permits the re-opening of wells. This, in my opinion, should not be permitted unless no other supply is available and the owner can definitely ascertain the source of pollution and give adequate guarantees to prevent a recurrence.

Swabs, Sputums, Widals.

The number of swabs and sputums submitted for examination is still much too small in proportion to the population of the city. Last year I made a recommendation that steps should be taken to call the attention of medical men to the laboratory facilities at their disposal. This was not acted upon. I am convinced that there are still many practitioners who are not cognizant of the facilities provided by the city, and I believe that the only way to remedy this defect is to put the information before them in such a manner that it will be kept constantly before them.

Milk.

The bacteriological content of the raw milk supply is distinctly higher than last year, the average count per cubic centimetre being 388,000, as compared with 181,000 last year.

The percentage of samples deficient in butter fat was 2.5, as against 2.2 in 1916, and 16.1 per cent. deficient in total solids, as compared with 10.8 per cent. in 1916.

The average quality of the various classes of milk is as follows:

—	Fat	Total Solids.	Solids not Fat.	Bacteria per c.cm.
*Farmers' Milk	3.94	12.70	8.75	388,000
Pasteurized Milk	3.68	12.43	8.75	34,000
Nursery Milk	3.92	12.79	8.87	54,000
Certified Milk	4.02	12.67	8.65.	13,500

*These figures represent the average of the genuine samples only.

Miscellaneous.

Once again there has been a considerable number of samples examined for other departments of the city and from the Police Department.

J. B. Hollingsworth, Chief Food Inspector.

I herewith submit a report of the work done by the Dairy and Food Inspection branch of the Department for the year ending October 31st, 1917.

Re Milk.

During the year, from 29 milk vendors. 2,197 samples were collected and tested, both chemically and bacteriologically at the Civic Laboratory. The samples are collected as usual during the early morning from the different milk vendors on the streets, and are brought to the laboratory for analysis. The Inspector, while collecting the sample, examines the milk containers, and also takes the temperature of the milk, to see that the milk is kept cold and that the containers are sound and clean. Out of the above number of samples, over 98 per cent. were found to be up to our standard in butter fat.

The bacteria count has been somewhat higher than last year. Two milk vendors who were largely responsible for this are now out of business.

Householders are again warned of the need of keeping milk cold, clean and covered after delivery to them; also of the importance of prompt return of milk containers in a cleanly condition. It is against the law to retain and use these containers for other purposes, as some people do. The careless consumer in this way is doing his bit towards increasing the cost to everyone else.

By-law No. 4418, regulating the licensing of milk vendors and the production of sale, and the sale of milk within the city, has received the necessary sanction—which requires that all milk shall be pasteurized save that which comes from herds tested and found free from tuberculosis.

Re Meat.

Five thousand and eighty-seven pounds of meat were confiscated as unfit for food. Three thousand five hundred and ten pounds of this was condemned for being tuberculous.

Two hundred and twenty-eight victualling permits were given.

Two hundred and twenty-five milk permits were issued.

There were forty-three permits for restaurants given out.

Eighty-two butcher licenses were taken out.

So far as this branch of your Department is concerned, five hundred and seventy-eight permits were granted, for which the city received five thousand six hundred and eighty dollars.

Re Bakeshops.

Our bake and confectionery shops have been carefully and regularly inspected. Inquiries have also been made as to the weight of bread. Several of the bakers have been fined, and any bread found underweight has been confiscated, all such, when seized, being given to the Charity Officer for distribution.

All meat, fruit, and vegetables that were condemned were sent to the incinerator and there destroyed.

Re Ice.

Sixteen ice permits were given last year for the harvesting of ice for the city's consumption on the Ottawa, Rideau and Gatineau rivers.

Regular inspections are made of all wholesale houses and other places where food is stored.

Co-operating with Department.

I am glad to report that during the year there has been a rather noticeable disposition on the part of restaurant-keepers, proprietors of butcher shops and those conducting ice-cream establishments and fruit stores to co-operate with the Department. Requests that we have made have been in most cases cheerfully and readily complied with, and those supplying foods of various kinds to the citizens have been courteous in responding to our requests or suggestions. While there may have been a few exceptions to this there were not many, and I have noticed an improvement in the disposition and desire to try and keep various city by-laws, and to display and arrange fruits and other lines of produce in a cleanly and sanitary manner.

In conclusion, I desire to testify to the good work done during the year by the members of the branch of your Department under my Direction.

G. O. S. Laflamme, Chief Sanitary Inspector.

I beg to present herewith my seventeenth annual report of the work done by the Sanitary Inspectors in your Department during the past year.

Apartment houses inspected	378
Abatement of nuisances	2,495
Barber shops inspected	315
Butcher shops inspected	27
Cellars inspected and found dirty	291
Cellars inspected and found clean	333
Cellars found with water in same	184
Contractors' closets inspected	13
Cases for prosecution	24
Convictions and fines	46
Contagious disease placards removed by Inspectors	3
Chemical closets installed	2
Comfort stations, number of inspections	435
City wells inspected	3
Calls made *re* installing water-closets	8
Complaints made to Inspectors	512
Complaints received in the office (See note *re* this)	10,000
Complaints well founded	800
Complaints unfounded	178
Calls, number made yearly	7,158
Drains found choked	31
Dead animals, *re* number reported on	36
Dead animals, number removed	36
Defective plumbing reported	54
Drains tested	19
Dump notices put up	32
Dumping in sewers, *re* complaints	6
Drawing manure through streets uncovered	9
Dwelling houses inspected	1,596
Dumping ground inspections	553
Flush closets sealed	1
Flush closets installed	55
Faulty manure boxes	498
Furnaces, defective	12
Frozen plumbing	107
Fruit store inspections	77
Garbage receptacles, number ordered	339
Hide dealers, premises inspected	41
Hen houses inspected and found filthy	28
Houses ordered to be vacated	9
Houses inspected and found dirty	15
Houses placarded	38
Hotel urinals, inspections	118
Illuminating gas, complaints	3
Ice field inspections	89
Ice inspected on street for storage, number	23
Ice houses inspected, number of inspections	42
Junk and second-hand shop inspections	286
Keeping fowl in cellars and dwellings	45
Keeping dogs in dwellings	10
Keeping horses in shed	3
Lodging houses inspected	389
Laundry inspections	800
Laundry permits, number issued	80
Livery permits, number issued	8
Lemieux Island inspections	104
Livery stable inspections	276
Lanes inspected and found clean	46
New manure boxes built	25
Number of manure piles removed	73
Overloaded manure boxes, number of	29
Other nuisances in vacant lots	13
Overcrowding inspections	181
Overcrowding notices given	36
Privy vaults, number to be cleaned	534
Privy vaults ordered removed	84
Privies inspected	205
Privy vaults inspected and found cleaned	3,860
Premises found filthy	100
Patrolling the Ottawa River, number of days	25
Porter's Island inspections	17
Private stables inspected, number of inspections	2,118
Placards removed	18
Roofs found leaking and defective	234
Refuse on streets, complaints	37
Refuse, complaints *re* same in lane	78
Refuse receptacles, improperly kept	396
Reports *re* garbage collections	1,950
Restaurants, inspections	7
Referred to Food Inspector, *re* complaints	10
Reports made to Engineer's Dept.	23
Reports referred to Fire Chief	8

Reports *re* privy vaults being cleaned made by Contractor, inspected and found not cleaned	39
Reports *re* privies repaired	92
Reports *re* privies inspected and found cleaned by Inspector	427
Reports made to Chief Plumbing Inspector	37
Sewer gas complaints	14
Stagnant water found on vacant lots	35
Stables newly built	83
Sanitary cards, new ones made	225
Samples of water tested by the Bacteriologist	6
Soldiers' barracks, inspected	5
School inspections	111
School urinals inspected	51
School absentees	1,020
Sheds found dirty	51
Stable inspections	37
Samples of ice taken for test	1
Stables found dirty	99
Swimming pool inspections	24
Stables found unfit and closed by us	20
Stables removed	2
Shop inspections, number found clean	16
Shops, vacant, number of inspections	13
Theatre urinals inspected	10
Vacant house inspections	59
Ventilation reports	15
Verbal notices given	2,495
Wells placarded	22
Water services found defective	59
Water closets found filthy	3
Watching trains *re* infantile paralysis	166
Wells inspected to see if placards were on	397
Wells re-placarded	6
Workshop and factory inspections	149
Written notices sent out by Inspectors	1,050
Waste of water reported	38
Yards found dirty	1,250
Yards inspected, *re* receptacles, and found clean	2,780
Yard inspections	4,122
School taps placarded	2
Re disinfection calls made by Inspectors	67
Entries made on sanitary cards	8,624
Entries *re* plumbing matters	1,712

Re Sanitary Inspectors.

All have worked hard and well to keep the city in a cleanly and sanitary state.

After an experience of sixteen years as Chief Sanitary Inspector, in which the number of inspectors has varied from two at the commencement to as many as twenty at special times, I can fairly testify that in my opinion the present staff is as small as we can succeed in accomplishing good work with. I believe that the small economy to be effected by a further reduction of the staff would not compensate for the impairment in the efficient work now being done by our present staff of experienced men.

Re Orders Received.

I wish also to state that the number of orders received from the Medical Officer of health and by phone in the office was over 10,000, which goes to show the number of complaints attended to by the Inspectors. This does not include the complaints received by the Inspectors when they are making their daily inspections.

Prosecutions.

The number of prosecutions in the police court for infringement against the Public Health Act amounted to 46.

Re Removal of Privy Vaults.

The number of improvements installed this year amounted to only 55. This is due to the scarcity of money, the high cost of workmanship and material, also owing to the nature of the land where some of the houses are situated, same being built on rock. A good many people have promised to install the improvements as soon as they can afford the money; also many of the owners are away at the war and we do not wish to make the hardship for those at home any harder.

Re Sanitary Cards.

I may say that besides the routine work, the Inspectors made out 225 sanitary cards and the stenographer entered 8,624 entries on the backs of these cards in the cabinet in the office. This does not include entries that were made pertaining to the 1,050 written notices sent out by the Inspectors. The secretary made 1,612 entries *re* plumbing matters on these cards. A complete record of any complaint or nuisance at any house in the city is kept on the back of the card concerned.

Patrolling the Ottawa River and Inspecting Lemieux Island.

One of our sanitary inspectors devoted 23 days of his time patrolling both sides of the Ottawa River and another inspector made 104 inspections *re* sanitary matters at Lemieux Island. I will again ask that a continuous patrol of the shores of the Ottawa River be made as I consider this has a lot to do with keeping the water supply of the city clean.

Streets.

I must take this opportunity of congratulating our Engineering Department for making Ottawa a dustless city, and we should be proud of our dustless streets.

Civic Comfort Stations.

The Public Comfort Stations on O'Connor Street have proved a benefit to the public at large, and I believe that we should have at least two more of these stations erected in Ottawa for the betterment of lanes and yards.

Conclusion.

In conclusion I wish to thank the sanitary inspectors and the clerical staff for their kind assistance and co-operation given me during the year.

I trust that the work performed by us all has been satisfactory to you.

PETERBOROUGH.

C. Hewitt Amys, M.O.H.

I beg leave to submit my annual report for the year ending November 30th, 1917.

There were 450 births and 365 deaths during the year. These deaths include a number of people who died in the hospitals, but came from outside municipalities.

It is gratifying to note that we had from the common contagious diseases of childhood, only three deaths—one from diphtheria and two from whooping cough; but unfortunately we had 14 deaths from tuberculosis.

We have had the following communicable diseases:

1 case of cerebro-spinal meningitis.
17 cases of scarlet fever.
8 cases of diphtheria.
7 cases of measles.

The physicians and laity still refrain from reporting cases of whooping cough and tuberculosis; but as for scarlet fever and diphtheria, these two diseases are promptly isolated in the hospital, and thus we are able to arrest the spread of same, and possibly save many a young life. When a case is reported to me, I report it to the school nurse and the teacher. They in turn hunt up the absentees, find out why they are absent, and, if sick, ascertain the nature of the illness. At present all the schools have not the Bell telephone and this causes considerable delay before I can get into communication with the teacher and the nurse; therefore, it is very essential that a Bell telephone be installed in each school.

Recommendations.

I beg leave to recommend the following:

1. That this Board place itself on record as opposed to the present Provincial Educational System of having "stock books" in our schools, i.e., the handing down of the same books from one pupil to another, year after year. Surely with the present very cheap supply system we can, if necessary, pay a little more and let our motto be "let each child have a new book." Again I advise you not to let this matter drop here, but to use all your power to have the above system abolished. I consider it to be a most insanitary practice. How would you like to give a child an old book that, possibly, a consumptive had the previous year?

2. That the plan of the property known as the "Hilliard Farm" be so altered as to provide for a roadway to run from a point near the Protestant Home to the Isolation Hospital. The advantages of same would be many: (*a*) It would enable us at some future date to connect up the plumbing of the hospital with the sewer; (*b*) it would give us at all times a passable approach to the hospital; (*c*) after it was graded, the ashes from the hospital and northern section of the city could be used to top dress same; (*d*) it would also make the present "Hilliard Lots" more saleable.

3. A free isolation hospital for the citizens of Peterborough. How much do you suppose we would have lost this year, up to the 6th of December, if the hospital had been free? Only $412.95, i.e., about one-eighth of the cost of its maintenance during that time.

An isolation hospital which is a boon and a benefit to every citizen should be free, and with a free hospital would go better co-operation, fewer communicable diseases and a lighter burden for those afflicted.

Sanitary Inspector's Report.

I have the honour to submit my first report for your consideration. I assumed the duties of Sanitary Inspector on the 21st of March, 1917. I find it impossible to give a complete detailed report as a great deal of this work has to be gone over several times. The following list of complaints will give you some idea of the work being done by the Sanitary Inspector:

Scavenger complaints	630
Garbage complaints	532
Slaughter houses inspected	22
Dead animals	27
Scarlet fever cases	17
Diphtheria cases	8
Measles cases	4
Milk tests	268
Notices served	144
Cow byres inspected	46
Stables inspected	50
Houses disinfected	3
Cesspools found	20
Burying night soil	5
Inspected all laundries.	
Inspected all eating houses.	
Inspected all Bakeries.	
Inspected 2 factories *re* sanitary conditions.	
Milk test—average for April	3.50
Milk test—average for May	3.60
Milk test—average for October	4.10
Milk test—average for November	4.00

The above figures do not rightly convey the amount of work done. Considerable time is taken up in return calls after the first visit. Sometimes I have to go several times before the instructions are carried out.

Scavenger Complaints.

Scavenger complaints, 630. I find some of the tenants refuse to pay the scavenger forty cents when the work is done, and others refuse to have the work done every month. This takes considerable time to investigate and straighten out.

Garbage Complaints.

Garbage complaints, 532. A number of these complaints are justified, others are groundless.

Notices Served.

Number of notices served, 144, to those who refused to comply with the Health By-law. On return visit to above places, I find improvement.

Milk Tests.

I have submitted the averages of milk tests for April, 3.50; for May, 3.60; for October, 4.10, and for November, 4.00. The milk tests throughout the summer months have been above the standard. I submit these tests to show the difference between the spring and fall milk.

Inspections of Dairy Farms.

Dairy farms. I find majority in first-class condition and owners willing to receive suggestions from the Inspector. Other where farm is rented not in good condition. Landlord will not make repairs and tenants do not feel disposed.

Slaughter-houses.

Slaughter-houses inspected, 22. Conditions with few exceptions are good. I found several with blood running direct from slaughter-house to pig pen, which has been changed and put in proper condition.

Have inspected all fruit stores, fish stores, bakeries, laundries, butcher shops and restaurants and find them in fair condition and willing to accept suggestions made by inspector.

I would like to express here, appreciation of the assistance given me by Mr. F. W. Miller, Relief Officer, both in the office and in investigation complaints.

PORT ARTHUR.

C. N. Laurie, M.O.H.

I have the honor to present my report for the year 1917.

It has been a fairly satisfactory year as regards contagious diseases, although the death rate in the city was higher than in 1916.

In 1916, there were one hundred and ninety-seven deaths from all causes.

In 1917, there have been two hundred and thirty-seven.

Stillborn	18
Premature birth	35
Under two years or age (exclusive of stillborn and premature)	43
From two to five years	4
From five to ten years	2
Over ten years (medical)	85
Over ten years (surgical)	3
Accidental	26
Tubercular	13
Brought from outside city for burial	6
Typhoid (brought from outside to our hospital)	2
	237

You will note the two deaths from typhoid. Both of these patients were brought here for treatment in our hospital, where they died. We can congratulate ourselves on the entire absence of typhoid in our city. There were thirteen deaths from tuberculosis. In 1915 we had seventeen deaths and in 1916, sixteen.

As yet, we have to treat tubercular patients in our general hospitals, which is very dangerous to the other patients, and unjust also to the tubercular patient, as it is impossible to give them proper treatment there. We have drawn attention to this matter for several years, but so far without results. The Government, which should provide a proper sanitarium for this class of patients in this district, has its hands full, at present, with matters relating to returned soldiers, etc., and also has not the necessary funds during these hard times. They prefer to have us send our patients to Gravenhurst for treatment. Unfortunately, Gravenhurst always seems to be overcrowded. Anyway, we are seldom able to get patients in there and then only after long delays. In spite of the hard times and the stringency of the money market, I think your Board and the City Council should urge upon the Government the need of a sanitarium in this district, for the treatment and care of tubercular patients.

As you will note, we had heavy outbreaks of measles and mumps last winter. These outbreaks started in 1916 and were brought here from the Rainy River District, by soldiers of the 141st Battalion, and spread throughout the city schools. We managed to get them under control by April, I am pleased to say, without having to close the schools. The number of contagious cases reported were as follows:

Scarlet Fever.

Year.	Cases.	Deaths.
1915	62	0
1916	2	0
1917	8	0

Diphtheria.

Year.	Cases.	Deaths.
1915	3	0
1916	4	0
1917	6	0

Measles.

Year.	Cases.	Deaths.
1915	6	0
1916	64	0
1917	318	0

Whooping Cough.

Year.	Cases.	Deaths.
1915	6	0
1916	44	2
1917	6	2

Infantile Paralysis.

Year.	Cases.	Deaths.
1915	0	0
1916	2	1
1917	0	0

Typhoid Fever.

Year.	Cases.	Deaths.
1915	13	1
1916	11	3
1917	2	2

In regard to the diphtheria, a child was brought here from Montreal while it was ill with a sore throat, another child in the house took ill, and, on medical advice being called, the cases were diagnosed as diphtheria. Two children, from another family, who played with them, also took ill, and were sent to the Isolation Hospital. During the outbreaks of mumps and measles among the soldiers last winter we were so badly overcrowded at the Isolation Hospital, we were forced to open a temporary hospital on Pearl Street, for soldiers.

We treated thirty-seven soldiers for measles and twenty-three for mumps in the Isolation Hospital, and twenty-four in the temporary hospital on Pearl Street.

Altogether we treated eighty-one patients in the Isolation Hospital, sixty soldiers and twenty-one civilians; the number of days nursing during the year being 2,631, at a cost of $2.01 per day.

Births.

1916.	Males	270
	Females	242
	Total	512
1917.	Males	231
	Females	308
	Total	539

This shows an increase of 27 for this year.

I started publishing a weekly milk report in the city paper this year. This report seems to meet the approval of all citizens, with the exception of the milk dealers. However, there has been a vast improvement in the condition of the milk, and we propose continuing it throughout the year.

I again have much pleasure in commending the satisfactory work done by Mrs. Flannigan, the Matron at the Isolation Hospital. She has given satisfaction in the treatment of the patients, and also for the excellent condition in which she keeps the hospital.

School Inspection.

The School Nurse, Miss Jones, has been busy during the year, visiting the schools daily, examining pupils sent to her by the teachers, and following absentees to their homes, to find the reasons for their being absent. In this manner we have been able to trace children ill with contagious disease, and prevent its being carried to the schools. The Nurse reports to me daily the result of her inspections, so I am able to keep a close watch on those who are ill. We have examined for eye, ear, nose and throat troubles, and passed on to the specialists nineteen children, whom we operated on in the hospitals. I am again pleased to be able to commend the good work done by Miss Jones. The following is the list of her visits and examinations during the year. You will note the large number of examinations in March, April and October. At that time there was a general examination of all scholars in the schools.

School Inspections.

Months.	Visits at Schools.	Home Calls.	Examinations.
1916			
November	58	152	37
December	23	58	44
1917			
January	54	280	15
February	58	234	40
March	56	158	23
April	23	52	1,197
May	47	130	822
June	44	56	33
September	36	25	27
October	32	41	2,208

Miss Jones was also engaged in health work during the summer holidays. She was of great assistance in visiting and instructing mothers in the care of their babies. Her services seemed to be much appreciated. I am glad to be able to say that 1917 was a banner year as regards good health among infants. We had less sickness during the usually dangerous months of July and August than we have had during the twelve years in which I have held office.

We have had a smaller number of charity patients this year. There has been a steady demand for labour, and every person able to work has been busy if they wished it. Only in cases where the bread-winner was ill I was called. I also attended a number of soldiers' families. I have treated altogether in my office thirty-six patients, and made twenty-four visits on the sick in their homes.

I addressed a number of mothers' meetings on the care of children and the prevention of contagious disease. I also distributed a number of pamphlets received from the Provincial Board of Health.

I gave a two-month course in First Aid Work, lecturing two evenings a week. We had a splendid attendance of thirty-four ladies.

I have attended the sick children in the children's shelter. Miss Foote is the Matron in charge.

With the Sanitary Inspector I have visited and inspected boarding-houses, hotels, bunk-houses, restaurants, butcher shops, bake-shops, fruit stores, the market and laundries, the Current River Park, dry dock, and elevators; all lanes, and a large number of yards, the dairies, city market, and slaughter-house. We had two visits from Dr. George, the District Officer of Health, during the year. With him I visited all the dairies, the elevators, dry docks, and coal dock section. We also had a visit from Mr. White, the District Inspector for the Provincial Board, both of whom expressed themselves as well pleased with the general cleanliness and health of the city.

FINANCIAL STATEMENT FOR 1917.

General Expenses of the Board.

Salaries:	
M.O.H., Sanitary Inspector, School Nurse, and Stenographer	$5,365 00
M.O.H., for expenses to annual meeting at Toronto	100 00
Lights and phones	125 59
Feed for horse	101 80

Drugs, etc.	7 25
Horse shoeing	14 50
Street Railway tickets, M.O.H., Inspector, Nurse, and Isolation Hospital	86 66
Ambulance and rigs	17 00
Printing	31 84
Postage and express	5 00
Book for School Nurse	2 50
Closet pail	1 30
Total	$5,858 44

Pearl Street Hospital.

To Nurse	$100 00
To cook	50 00
To furnishings	332 76
Rent	50 00
Groceries, meat, milk, etc.	136 64
Drugs	25 20
Marks Clavet Dobie Company	15 95
Moving furniture, and repairs	10 56
Coal	60 50
Wells and Emmerson	71 27
Total	$852 88

Isolation Hospital.

Salary to Matron	$900 00
Special Nurse	276 00
Repairs to Hospital	331 22
Coal and wood	489 40
Board account for patients	1,568 85
Power and light	50 32
Plumbing	47 52
I. L. Matthews	73 80
Mahon Company	29 53
Dunn Hardware Company	1 10
Drugs, etc.	140 26
Marks Clavet Dobie Company	54 45
Wells & Emmerson	44 75
J. Merrill	21 20
Woodside Bros.	17 40
Pigeon River Lumber Company	23 91
City, for hauling water	7 50
A. E. McDonald	19 60
Bray & Company	3 15
Allowance for help and provisions	1,200 00
Total	$5,299 96
Total expenses	$12,011 28
Credits from Board accounts $1,214 00	
Credit from sale of stove 20 00	
	$1,234 00
Balance	$10,777 28
Amount still due from the Militia Department	$175 00

STRATFORD.

J. A. Robertson, M.O.H.

To me it is a great pleasure to present to you a most favourable report of the city's health for the past year.

Vital Statistics.

I find there were registered with the City Clerk three hundred and thirty-three births, one hundred and fifteen marriages, and one hundred and sixty-three deaths. It is gratifying to know that nineteen per cent. of the deaths were over seventy years old. I find that the death rate is only 9.5 per thousand, basing our population as per assessor's report. This is certainly a remarkable record and keeps our city as heretofore on the "front line."

During the early part of the year we had a number of cases of scarlet fever, measles, mumps and chicken-pox, but by exerting every precaution, employing every method of isolation, quarantine and disinfection, we were able finally to cope with the invaders.

Sanitary Inspector.

The city was thoroughly inspected as to sanitary conditions. Citizens were requested to assist to make our city beautiful by keeping lawns in front of premises in good order and planting flowers to add to the beauty of surroundings. A hearty response was given, as was evidenced by the clean and beautiful appearance of each dwelling. Exceptions are always found, and notices were sent to all parties not observing the regulations.

The Sanitary Inspector zealously carried out his duties. Restaurants and all places where food-stuffs are dealt out were carefully looked after. Butcher shops and slaughter-houses have all been inspected several times during the year and were found in most cases trying to observe the regulations.

Milk was tested from time to time and on the whole was well up to the standard.

Condition of Dairies.

Dairy barns were all inspected and found in a very fair condition, although there is still room for improvement. The cows on the whole seemed healthy and in good condition.

Our water supply at the beginning of the year was not up to the mark, but now, through the untiring efforts of the Utilities Commission, particularly the chairman, such changes have been made that now we have absolutely pure drinking water. We have been having frequent tests of the water made, and as a rule results were very satisfactory. The citizens can rest assured that after a few more changes we shall have the purest water supply in the province. The river water is now completely shut off.

Grocery Stores.

Grocery stores and cellars were inspected and found in most cases clean and nicely kept.

Outside Privies.

The abolishing of outside privy vaults has not been so extensively done this year as we would like, but owing to war conditions and the cost of modern fixtures having advanced so in price that owners of houses were in many cases unable to meet the expenditure without great personal inconvenience. Notwithstanding unfavourable conditions, seventy houses have been modernized during the year. We are progressing favourably in the matter.

The Sanitary Inspector has regularly inspected butcher tables and meats in market shelter, weighed butter offered for sale frequently and usually found it full weight. Only one butchered animal offered for sale was found by him unfit for food. He had the same destroyed.

He draws attention to the carelessness of many housekeepers in throwing refuse in backyards, and also not careful enough about putting garbage as dry as possible and well wrapped in paper into the garbage can. He has time and time again notified people to attend carefully to this matter in the interest of the collectors and the trouble it would save at the incinerator.

Dumping Ground.

We have some difficulty in finding a dumping ground for the accumulating stuff that cannot be disposed of by the incinerator. We would urge that a dumping ground be procured to provide for this matter.

I would respectfully call the attention of the city Council to the unsanitary condition of the basement of the City Hall. The ventilation is of the worst, and steps

should be taken by the Council to have the same remedied. There should be no putting off matters relating to health protection, and the chairman of the committee whose duty is to frame means for carrying out suggestions made for health protection should act as promptly as circumstances permit.

Park Board.

I have pleasure in congratulating the Park Board on work done to beautify the city, thereby tending to its healthfulness. Every pleasing object witnessed tends to promote health. Contemplated additions will still further add to present accomplishments.

Sewage Disposal.

Frequent visits were made to the sewage disposal works, and although conditions were somewhat satisfactory, yet there is still some grounds for improvement. The engineer has been faithful in his duties in connection therewith.

ST. CATHARINES.

F. King, M.O.H.

Annual Report of Chairman.

In accordance with the requirements of the Public Health Act, I have the honour to present to you my annual report.

It is very gratifying to state that the statistical reports of the Secretary of the Local Board of Health show the health standard and the sanitary conditions during the past year to be very satisfactory. Although there was an increase of over 1,100 in population, and an increase in the number of births of 84 over the previous year, there was a decrease of 55 in the number of deaths, the figures of the death rate being respectively 308 in 1916 and 255 in 1917.

In 1916 there were 471 cases of communicable disease, with 33 deaths; this year but 107 cases, with three deaths.

The work on the construction of the new and enlarged trunk sewers in the northern section of the city has been continued as labour conditions have permitted. This work has been essentially necessary in the interest of the public health, and anything which will tend to improve health conditions cannot be safely disregarded. During the past twelve months there has been constructed 6,332 feet of sewer of 24 inch and upwards; of this, 5,211 feet was from 54 inch to 72 inch in diameter. Two hundred sewer connections were made to private homes. The garbage collecting system, imperfect as yet as it may be, is and will be an increasing factor in making for improved health conditions and a clean city, in conjunction with sewers and pavements.

Frequent tests of the city water, taken from different parts of the city, show it to be free from any pathogenic germs. Only two deaths are reported from typhoid fever, out of ten cases, and these were nearly all contracted outside of the city.

During the year the Local Board of Health has considered favourably a change as regards our Isolation Hospital. When built, the law did not permit of its erection near the General and Marine Hospital. That law has since been changed. It was not permissible a few years ago, but is now, to have cottages or wards erected in the vicinity of the General and Marine Hospital for the care of diseases of a contagious character, where there would be less danger of cross-infection, and where the patients would have the care of a larger staff of trained nurses, and the nurses in training have the advantage of gaining an experimental as well as a theoretical knowledge of such cases. The Board of Trustees of the General and Marine Hospital and the Superintendent look with favour upon, and, I am confident, are prepared to co-operate with the Local Board of Health in bringing about the change proposed, and I trust that next year this may be brought about, and I am sure the Council and people will approve a change which will be in the direction of a right economy, as well as in the combined interest of patients and nurses.

The Medical Officer of Health, in his report to the Board, refers to the experiences gained through the military medical examinations since the outbreak of the war, and to the deplorable fact that so large a percentage of the young manhood of the country have physical imperfections which unfit them for military service and the defence of their nation. No doubt this result arises, to some extent at least, from an almost complete lack of physical exercise and training during their early school days. The con-

ditions are largely remediable, and the best attention of school boards and parents should be given to such athletic and physical training as would produce a more robust physical manhood. "A sound mind in a sound body" should be our endeavour for the growing generation. To inculcate a more general inclination in our schools for athletic sports and games, necessitating more outdoor exercise and pastimes, I have felt that junior athletic organizations should be formed in each public and separate school, and that once or twice a year a field day of outdoor sports should be observed, and as a small encouragement in that direction I am prepared to offer two suitable shields for competition, one for the boys and one for the girls, to be awarded on a series of points, all the details of which competitions could be arranged in due time.

Annual Report of M.O.H.

I beg to submit the annual report on the sanitary and other conditions relating to the health of the city for the year ending October 31st, 1917.

Generally speaking, the health of the city has been very satisfactory, and the death rate unusually low.

Vital Statistics.

The total deaths from all causes was 250, as compared with 308 last year, and with 234 five years ago, when the population was over five thousand less than now.

No outstanding event, as regards contagious disease, has been observed.

I am indebted to the Secretary for the following vital statistics, which the Board will observe are favourable.

The following communicable contagious diseases were reported, viz.:

	Cases.	Deaths.
Diphtheria	27	1
Typhoid fever	10	2
Measles	51	0
Scarlet fever	8	0
Smallpox	1	0
Chicken-pox	7	0
Mumps	1	0
Whooping cough	2	0
Total	107	3

Last year there were 471 cases of communicable diseases recorded, with 33 deaths. In addition to the above there were reported 11 cases of tuberculosis and 20 deaths.

There were also 19 deaths from pneumonia. This disease still keeps among the front ranks of the fatalities.

Still and premature births were accountable for 38.

Thirty-eight children under one year of age died, also 14 under five years of age.

Of the 10 cases of typhoid fever recorded, six were from the County, and as far as known, one, possibly two, contracted the disease in other parts of the Province.

The 51 cases of measles may be regarded as the winding up of the Province-wide epidemic of last year.

One case of smallpox was recorded. Prompt isolation and vaccination prevented its spreading. This was the first appearance of this disease since 1909 in this city. There were 86 houses fumigated and 71 houses placarded.

The total births were 607, as compared with 542 last year. There were 170 marriages, as compared with 247 last year. The total population is given as 19,078, as compared with 17,880 last year and 13,403 five years ago, showing progressive growth notwithstanding the war's drain.

Sanitation.

During the year there were constructed 6,332 feet of new sewers of various dimensions, together with 200 sewer connections made; all of which improves the sanitary conditions of the city and aids in reducing the death rate.

There were approximately 10,000 tons of garbage and other refuse removed from the limited area served by the present system.

There were also collected and disposed of 371 carcases of dead animals, not including the number handled by the police or by private citizens.

The present system of collecting and disposing of refuse matter is neither satisfactory nor economical. The area served should be extended.

The Isolation Hospital.

The Hospital is kept scrupulously clean and the management as satisfactory as the means available will admit.

Total number of patients admitted during the year, 27.

The total cost of the institution, as compiled by the City Treasurer, for the past year was $1,443.26. The revenue from all sources was $450.75. The average cost of each patient was $64.79. The average cost per day for each patient was $3.23.

The views expressed in former reports, recommending the adoption of a more modern and centralized system for the care of contagious diseases, are still held.

Military Examinations.

The experience gained through the military medical examinations should impress the general public with the deplorable fact that apparently nearly 70 per cent. of the young manhood of the country are physically unfit to defend their country and homes from foreign aggression.

The conditions revealed from these extensive examinations should receive the prompt and earnest consideration of all governing authorities.

Annual Report of Secretary.

I hereby submit my annual report from November 15th, 1916, to November 15th, 1917.

Attached to this report is a list of deaths and their causes during the year, also a summary of their ages at the time of death.

I also submit a list of diseases classed as contagious, as reported by the medical practitioners of the city, which shows only 117 cases as compared with 471 in 1916.

All premises where contagious diseases existed were promptly fumigated by the Sanitary Inspector.

Births reported: Male—326; Female, 300. Total of 626, an increase of 84 over 1916.

Marriages reported, 179, a decrease of 68 from 1916.

Deaths reported, 255, a decrease of 53 from 1916.

The population, as returned by the Assessment Commissioner for 1917, was 19,078, an increase of 1,161 for the year. Although the population has largely increased, the death rate has decreased, which shows the city to be in a healthy condition.

The sewer system has been extended, and more extension is contemplated.

Contagious Diseases Reported.

	Cases.	Deaths.
Diphtheria	27	1
Tuberculosis	11	19
Typhoid fever	10	2
Measles	51	0
Scarlet fever	8	0
Chicken-pox	7	0
Mumps	1	0
Whooping cough	2	0
	117	22

Number of births	626
Number of marriages	179
Number of deaths	255
Population, as returned by Assessor for 1917.	19,078

Age at Time of Death.

Still and premature	33
Under 1 year	43
1 year to 5 years	18
5 " 10 "	3
10 " 20 "	11
20 " 30 "	20
30 " 40 "	12
40 " 50 "	18
50 " 60 "	20
60 " 70 "	34
70 " 80 "	25
80 " 90 "	14
90 " 100 "	4
Total	255

Sewers Built.

122 ft. 24-inch Cast iron sewer.
1,190 ft. 72-inch Brick sewer.
2,829 ft. 60-inch Brick sewer.
1,189 ft. 54-inch Brick sewer.
486 ft. 30-inch Tile sewer.
523 ft. 24-inch Tile sewer.

200 Sewer connections made to private houses.

MEDICAL HEALTH REPORT FOR THE YEAR ENDING DEC. 31st, 1917.

	Cases.	Deaths.
Typhoid	28	3
Diphtheria	75	3
Scarlet Fever	5	0
Measles	172	0
Variola	5	0

ST. THOMAS, April 17, 1918.

There were also quite a number of cases of varicella, whooping cough and mumps. There were no cases of infantile paralysis or cerebro-spinal meningitis.

Of the 28 cases of typhoid fever, 18 were railroad men who contracted the disease, some in Windsor and at Montrose, and were treated here either in their homes or in the Amasa Wood Hospital. There were 3 deaths from this class in this epidemic. Several cases occurred from an infected milk supply. The farmer supplying the milk, who resided in Southwold township, his wife and two sons all contracted the disease. His wife died. Seven cases, some of them severe, occurred along the milk route. The Medical Health Officer of Southwold was notified and the milk prohibited from being sold in the city, and the epidemic ceased. There were no deaths in the city from this outbreak, although some of the cases were quite severe.

Two cases of the 28 were small children who contracted the disease by drinking water out of Kettle Creek just below the septic tanks.

A nurse in training contracted the disease in Amasa Wood Hospital.

Diphtheria was quite prevalent during the year, but generally of a very mild type. The antitoxin furnished by the Provincial Board was used freely both in the disease and for immunizing purposes with unvarying good results. The three cases that died had laryngeal diphtheria.

Of the 5 cases of scarlet fever, one was a student from Ann Arbor University who came home broken out with the disease. Three cases contracted the disease outside the city. In one case the source of the disease could not be found.

During the last six month of 1917, measles prevailed to a large extent in the city. Placarding prevented a general outbreak. The 175 cases were made up to a great extent by one case in a home infecting the other children, also by cases being brought into the city who had contracted the disease in other municipalities.

Three of the cases of smallpox contracted the disease in Michigan (two of them in Detroit). The origin of the other two cases could not be found.

This record of contagious diseases in St. Thomas for 1917 is very fair, considering the many facilities for the spread of these diseases owing to its being a large railroad centre and a large per cent. of the population being railroad employees whose employment takes them out of the city to other large centres.

Milk and meat inspections were made regularly during the year, and a good supply of pure clean, unadulterated milk was furnished to the citizens.

D. A. MCKILLOP.

Medical Officer of Health.

WINDSOR.

C. R. Cruickshank, M.O.H.

Report of Chairman (J. Wilbert Brien).

I have the honour to submit for your information and consideration the annual report of the Medical Officer of Health of the city for the past year, which is so full and comprehensive that I feel that any formal reference that herein could be made to the work of the Board would be superfluous and not requisite under the provisions of the Health By-law. Suffice it, therefore, to add that the proceedings of the Board have throughout the past year, as in 1916, been marked by unanimity and a strong desire to protect the inhabitants by every available means from the inroads of disease of whatever nature, but especially from such as may be communicated from one patient to another; and it is believed that the inhabitants of the city as a whole will readily award the Board the credit of exercising the power vested in it with a minimum of inconvenience to afflicted families.

Appended hereto is the statement of the Secretary, under proper headings, of the number of communicable diseases reported at the Health Office during the year, and the number (if any) of the deaths resulting therefrom.

Report of Secretary (M. A. Dickinson).

The city record of communicable diseases for the twelve months ending to-day is as follows:

Disease.	Cases Reported.	Deaths.
Smallpox	10	0
Scarlet fever	103	0
Diphtheria	248	16
Measles	95	0
Whooping cough	4	0
Typhoid fever	23	11
Tuberculosis	37	27
Infantile paralysis	0	0
Cerebro-spinal meningitis	5	5

Revenue and Expenditure.

Annual appropriation by City Council	$9,350 00
Disbursements to date	9,903 35

Report of M.O.H.

I beg to submit my annual report for the year ending November 15, 1917.

Births and Deaths.

There were seven hundred and sixty births in Windsor last year, and four hundred and thirteen deaths.

Infant Mortality.

One hundred and fourteen died during the first year of life, and in all one hundred and thirty-five during the first three years of life. There were one hundred and twenty-two deaths last year, and one hundred and five the year before, in infancy.

Infant Welfare Work.

It will be noticed that about one-third of all our deaths occur in infancy. If we would cut down this percentage we must institute Maternity and Infants' clinics. Our infant welfare work has not been systematic nor extensive. During the hot weather

in the least hygienic part of the city our nurse visited as many babies as possible and gave what help she could. This is one of our most urgent problems and is linked, of course, with the milk question.

Our Milk Inspector and pasteurizers are helping, but to have milk properly cared for in the homes is a very difficult problem.

Contagious Diseases.

Disease.	Cases Reported.	Deaths.
Smallpox	8	0
Scarlet fever	96	0
Diphtheria	223	16
Measles	99	0
Typhoid fever	25	8
Tuberculosis	37	27
Infantile paralysis	0	0
Cerebro-spinal meningitis	4	3

Smallpox.

Eight cases, no deaths.

Our intimate relation with Detroit exposes us to the disease. Fortunately our children are practically all vaccinated before going to school, so that the disease does not spread.

Our smallpox hospital was destroyed by fire, so that it is difficult to care for the afflicted, and very expensive to them as well as to the city.

Scarlet Fever.

Ninety cases, no deaths.

The mildness of the outbreak made it difficult to diagnose and was the cause of much heart-burning to those whose liberty was curtailed and whose savings were wiped out by quarantine. How much would each case cost some citizen in actual cash, not to speak of other losses and annoyances, not for his own good, but for the welfare of his fellow citizens? Till we have an Isolation Hospital there is no means of lessening the burden, and the unfortunate must not only pay for their own trouble, but must also bear the expense of quarantine, which is not for their own benefit but for their neighbours.

Diphtheria.

Two hundred and twenty-three cases and sixteen deaths.

This is one of the worst records in the Province. Our relations with a large city constantly expose us to contagion, and we must do better next year. Seventy-five per cent. of diphtheria cases have no membrane, so that we must depend for our diagnosis on the laboratory. This disease is spread by carriers, many of whom feel perfectly well.

Efforts to Detect and Limit Contagious Disease.

Teachers send to the School Doctor everyone with a sore throat or suspicious symptoms. School Nurses examine systematically all children and send all suspected cases to the School Doctor for examination, and send throat swabs of all exposed, to the laboratory. When a case is reported, the Nurse at once proceeds to the school-room of the child and examines all children exposed, makes swabs of all throats and sends them to the laboratory, visits the homes of absent children for examination, and notifies the School Doctor of suspicious cases.

Rules for Quarantine.

1. The patient must be placed in a room by himself and kept away from the rest of the family till released by the Health Officer. Remember, a patient may be well and still contagious.

2. Everyone in contact with the patient is quarantined. No one is to be taken to another house without our consent. If removed to another house he will still be quarantined till released by the Health Officer. With diphtheria no one is permitted to change residence until a negative report is received from the laboratory.

3. Attendants must wear a special gown during all intimate personal service to the patient, and must wash or disinfect their hands after every contact with the patient. This gown must not be touched by others.

4. None of the household is allowed on the street without consent of the Health Officer.

5. In diphtheria, the attendant and all the children must be immunized by antitoxin, which is furnished free of charge by the Provincial Board of Health.

6. The Health Department considers the following diseases contagious during the incubation stage, i.e., before symptoms of the illness appear: typhoid fever, paratyphoid, cerebro-spinal meningitis, whooping cough, so that all exposed to these diseases during the incubation stage are to be isolated.

Release from Quarantine.

On request for release a Sanitary Inspector will investigate and report to the M.O.H.. If it is concluded that quarantine should be removed the Board of Health nurse will explain the steps necessary and personally supervise the disinfection, or call again and be thoroughly satisfied that all directions have been carried out.

1. *Persons.*—The patient and all those who have come in contact with him must take a complete antiseptic bath as directed by the Board of Health nurse, with particular attention to the hair and finger-nails.

2. *Clothing.*—All clothing, where possible, must be boiled at least half an hour; clothing that cannot be boiled must be collected and treated as directed by the Board of Health nurse.

3. *Rooms.*—All rooms which the patient has occupied or entered must be thoroughly scrubbed with hot water and soap, or other detergent, as directed by the Board of Health nurse, and when considered necessary the walls and ceiling must be repapered and kalsomined.

4. *Carpets, Rugs and Furniture*, when possible, shall be boiled or wiped with hot water and antiseptic, as directed by the Board of Health nurse, and every article in the exposed rooms must be removed from the house and placed in the sunlight for at least three hours. Direct rays of the sun make the most efficient disinfectant known.

5. *Fumigation* has been given up in many cities, but for a time we will continue it. Every opening in the fumigated room must be closed, all cracks and crevices plugged, and all articles opened up to the fumes.

6. Until all directions of the Sanitary Inspector and nurses are carried out to the satisfaction of the Health Department, quarantine will not be removed.

7. *School Certificates.*—A certificate from the family physician that a child "has been ill with (naming the disease), which is a non-communicable disease," will be accepted by the teacher. Where the disease is contagious the certificate is issued by the M.O.H.

Measles.

Ninety-nine cases were reported. This shows a growing disposition to register these cases.

Tuberculosis.

Thirty-seven cases were reported, and twenty-seven deaths.

Hitherto we have had more deaths than cases reported. Most of these cases reported came from our tuberculosis clinic, which is held every Thursday afternoon in the Labelle Block, by Dr. Flock, of the Sanitarium. The citizens of Windsor will never fully appreciate this wonderful work for their welfare. Sub-normal children are sent from the schools; others are sent by physicians. During the last six months, sixty-eight were examined; thirty-seven reported to the authorities as advanced cases. The Board of Health nurse who assists at the clinic visits, to keep as sanitary as possible, the homes of those who do not go to the sanitarium. *Every residence in the city should have an out-door sleeping-room, the use of which would give the greatest benefit to everyone sub-normal from almost every cause.*

Typhoid Fever.

Twenty-five cases were reported, with eight deaths; but twelve of these, with five deaths, were brought from outside municipalities for treatment, leaving thirteen cases and three deaths in Windsor. Evidently all our cases have not been reported; the percentage of deaths is too high for the number of cases.

We cannot impress too strongly on the Water Commissioners the danger of imperfect chlorination. With the present system of liquid chlorine carefully carried out there should be no cases to report next year.

Infantile Paralysis.

Infantile paralysis, which caused us so much trouble last year, was completely absent this year, but we had four cases of epidemic cerebro-spinal meningitis and three deaths. Our prompt and strict quarantine limited this to the playmates of two families.

Food Inspection.

During the year over sixteen tons of food have been condemned and destroyed because contaminated with tuberculosis, septicæmia, gastro-enteritis, pneumonia, hog-cholera, abscesses, poly-arthritis, peritonitis, immaturity, decomposition, etc., and dairy products for bacterial pollution and contamination acidity. The Inspector kept a close watch on dairies and has made many analyses of milk. Our milk compares favourably with that of any city in Canada. He complains of the filth of the slaughter-house and recommends a public abattoir.

Isolation Hospital.

In spite of our efforts we have had too many cases of contagion. This has been owing to the mildness of many cases which were overlooked, and no doubt to the concealment of some who dreaded the consequences of quarantine.

If we had an Isolation Hospital so attractive and so well equipped that there would be fewer deaths than in the homes, we might avoid this. Citizens voted down a proposal for an Isolation Hospital because of expense. There were two hundred and twenty-three cases of diphtheria and sixteen deaths. If we figure the loss of time of bread-winners as well as the cost of nursing and medical treatment at one hundred dollars a case, the cost to our citizens would be twenty-two thousand three hundred dollars for diphtheria alone. This would build a good hospital.

Plumbing.

Three years ago the Board of Health reorganized the plumbing, making it necessary, in addition to inspection, that plans of all plumbing and drains were to be filed in the City Hall. This work has now been taken over by the Building Inspector.

Nuisances.

Seven hundred inspections of nuisances were made and corrections ordered. Seventeen offenders were brought to the police court for violation of the Public Health Act and each one found guilty. Thirty owners were compelled to instal sanitary conveniences, and fourteen were installed by the Board of Health according to the Act, to be paid for with the taxes. Next year we expect to have sewer accommodations in every home.

WOODSTOCK.

ANDREW MACKAY, M.O.H.

I herewith submit my annual report of the Health Department of the City of Woodstock for the year ending 15th November, 1917.

Number of births during the year, 186.

Number of deaths registered during the year, 139. Of these 16 were still-births and 17 were deaths of non-residents who came into the city for treatment, leaving 106 as the actual deaths of residents. This gives a death rate of 10.5 per thousand of the population; the population of the city being 10,027, as shown by the last assessment.

Deaths were due to the following causes, viz.:

Still and premature births	16	Gangrene	2
Pneumonia	11	Apoplexy	5
Old age	16	Heart failure	4
Disease of brain	4	Cerebral meningitis	3
Septicæmia	2	Accidents	10
Heart disease	4	Appendicitis	2
Typhoid	2	Hemiplegia	2
Tuberculosis	6	Cancer	7
Splenic anæmia	3	Malnutrition	2
Convulsions	4	General debility	2
Bright's disease	4	Arterial sclerosis	2

and one each of the following: sclerosis of liver, diabetes, paralysis of heart, la grippe, stenosis of pylorus, neurasthenia, spinal sclerosis, bronchitis, intestinal obstruction, pulmonary hemorrhage, asthma, disease of kidneys, alcohol poisoning, ulcerative endocarditis, rheumatic endocarditis, angina pectoris, inflammation of the liver, diarrhœa, septic peritonitis, dropsy, paralysis, pulmonary abscess, cerebral hemorrhage, congestion of the lungs, pernicious anæmia, endocarditis.

The deaths occurred between the following ages:

Still and premature	16
Under 5 years	10
From 5 years to 10 years	4
" 10 " 20 "	1
" 20 " 30 "	5
" 30 " 40 "	8
" 40 " 50 "	9
" 50 " 60 "	9
" 60 " 70 "	28
" 70 " 80 "	31
" 80 " 90 "	15
" 90 " 100 "	3

COMMUNICABLE DISEASES.

Disease.	1916.		1917.											
	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Total.
Typhoid	1	5	....	....	....	....	....	....	....	1	3	9	1	20
Mumps	2	8	3	27	11	2	7	....	2	....	....	....	....	62
German Measles	4	17	64	69	44	7	4	....	5	....	....	1	....	215
Scabies	1	....	....	....	....	....	....	....	....	....	....	....	2	3
Tuberculosis	....	1	1	....	....	3	1	....	2	1	....	....	....	9
Chickenpox	....	9	15	16	5	5	....	....	....	....	1	....	1	.....
Erysipelas	....	1	....	....	....	2	....	....	....	....	....	....	....	3
Measles	....	5	....	....	....	....	....	....	....	....	....	1	11	17
Whooping Cough	....	....	1	....	....	....	....	....	....	....	....	....	1	2
Diphtheria	....	....	....	2	....	....	....	....	....	....	....	....	....	2
Impetigo Contagiosa	....	....	....	1	....	....	....	....	....	....	....	....	1	2
Scarlet Fever	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals	8	46	84	115	60	19	12	....	9	2	4	11	18	388

Milk Supply.

Monthly tests of the milk have been made during the year. The samples for testing are taken from the producers' cans before being emptied at the dairy; a sample is also tested from a dairy conveyance.

The butter fat has been usually above the standard required. Some samples from the producers' cans still contain much sediment. The sediment is removed at the dairy, where the milk is filtered and pasteurized before being bottled. The Board insists on keeping the sediment out of the milk, and not removing it after it often taints the milk.

The Woodstock Dairy Company have installed an up-to-date plant for pasteurizing and handling the milk.

The members of the Board visited the dairies supplying milk for the city, and found them, in the majority of cases, well kept.

Meat Supply.

The Board made a couple of inspections of the slaughter-houses supplying meat for the city; a few of them were found in very unsatisfactory condition.

We have had reason to complain of the condition in which the market stalls and equipment of the farmer butchers have been kept during the year.

The number of typhoid cases occurring this fall was larger than usual, but, in nearly all, the local conditions accounted for the disease.

There are many earth closets still in use, even in the thickly settled parts of the city; they are a nuisance and menace to the surrounding people. Many objectionable ones have been removed during the year.

I have to express my regret at the departure of our Chairman, Mr. Fielden Crossley, from the city. He was a highly respected and useful citizen as well as a valued member of the Board of Health.

I thank the members of the Board for their co-operation in carrying on the work of the Board during the year.

AMHERSTBURG

T. James Park, M.O.H.

In presenting my report for the year 1917, I will state that during the first part of the year we had a number of cases—measles, mumps and typhoid, and a couple of scarlet fever cases. Fortunately no deaths. You will remember his Worship the Mayor was a patient with a severe attack of typhoid fever.

In the month of May the inspection of the town began, and continued every month, with an improvement of the sanitary condition. In the month of June two cases of smallpox developed. I took immediate precautions and strict quarantine of the houses, and vaccinated those exposed. These persons had never been vaccinated. Had samples of water tested by Provincial Board of Health, and the reports came back that they were polluted with the bacilli colon, which showed itself by the number of typhoid cases, in spite of the repeated warnings and public notices to boil all drinking water. I strongly advise everyone to take the anti-typhoid vaccine treatment. Typhoid can be driven from here by the typhoid inoculation.

I am glad to know that we are in sight of a pure water supply, which is of such vital importance to the town, as a money value cannot be placed on human life. Negotiations are now going on by the town authorities and the Bromer Mond Canada, Ltd., which company has now under construction here an immense plant which will employ a great number of men. If negotiations are successful the Bromer Mond will supply a pure grade of treated water to the residents of the town.

I will urge the sanitary connections of all outside toilets that are on streets with sewers, and the thorough sweeping of all paved streets, and kept clean and neat all seasons of the year; and a milk by-law must be passed.

BARRIE.

A. T. Little, M.O.H.

I beg leave to present the Medical Officer of Health's report for the year 1917, which no doubt will be satisfactory to your honourable body. It shows that the public Health has been well looked after by your Health Officer, and my duties as Chairman have been very light because of your very efficient Sanitary Inspector, who has been very active in the discharge of his duties. I think he has done everything in his power to keep the municipality in as sanitary condition as possible.

It is also very gratifying to know that the expenses this year are very much less than last year.

Expenditures.

Medical Officer of Health	$225 00
Sanitary Inspector	528 33
Sanitary Inspector—substitute	15 00
Isolation Hospital	164 52
Supplies—drugs	106 45
Printing	7 00
Legal	20 00
Telephone	15 40
Miscellaneous	16 55
	$1,098 25

Medical Officer's Report.

My report on the sanitary condition of the municipality for the year 1917 is as follows:

Births	181
Deaths	171
Deaths from contagious diseases:	
Cerebro-spinal meningitis	1
Tuberculosis	4
Cases of contagious diseases reported:	
Scarlet fever	21
Measles	28
Diphtheria	2
Typhoid fever	14
Cerebro-spinal meningitis	1

We have had an increase in the number of typhoid cases over that of previous years. The infection came, no doubt, from our milk and cream supply, and until a pasteurization plant is established and all milk and ice-cream vendors compelled to have their milk treated before delivery, we will be subjected to this danger. Our larger cities safeguard the public in this way and have very little typhoid to contend with. Pasteurization has already been recommended by your Board, and if the vendors cannot agree among themselves as to the ways and means, the municipality should insist on their carrying out this much needed reform in handling milk.

Certain cesspools in the 6th Ward have been condemned and their owners instructed to have them done away with, and either to make sewer connections or revert to the use of the dry earth closet. On sanitary grounds the council should be recommended to extend the sewer system to afford accommodation for this purpose.

Several houses have been placarded as unfit for habitation until the owners have them put in sanitary condition.

Your inspector has been ordered to make monthly inspections of all slaughter-houses, butcher shops, bakeshops, restaurants, ice-cream parlours, etc., and to file his report of same with the M.O.H. This has been done.

From repeated analysis of the town water it has always been shown to be absolutely pure. Waters from many wells in the municipality have been found to contain "colon bacilli." The owners were compelled to sink new wells or connect up with the town waterworks system.

The statutory number of meetings of the Board has been held during the year.

BROCKVILLE.

A. J. Macaulay, M.O.H.

Herewith you will find the annual reports of the Medical Officer of Health, Secretary of the Board, and Sanitary and Veterinary Inspectors.

It is a matter for congratulation that the labours of the Board during the past year have been very light. The cases of contagious and infectious diseases, other than measles, were very few in number.

The burdens necessarily imposed by the war have rendered the installation of a filtration plant for the present impracticable, but every precaution is taken to make the water wholesome. Frequent tests of the water show that the chlorination process eliminates the harmful bacteria.

The milk appears to have risen both in quality and in price, but it is said not to be out of proportion to the rise in prices of other kinds of food.

The Vital Statistics show that the births are keeping well ahead of the deaths.

From a public health point of view, the condition of the town is quite satisfactory.

Report of M.O.H.

In this my annual report I beg to submit the following:

Of typhoid four cases were reported, with one death, this occurring in a young man employed on the Grand Trunk Railway, and while his family lived here he spent the greater portion of his time on the road, drinking water from different places along the line; the other three lived here, but during the summer were much on the River St. Lawrence, the water from which is always dangerous here when untreated.

The water supplied by the town is safe (barring accidents to the chlorination plant), wells are generally used, although the people have been repeatedly warned of their danger, some having the idea that the water when treated is injurious to them.

We have had seven cases of diphtheria, with two deaths, much too high a death rate, which should and would be lower if we had an isolation hospital in general use.

Of scarlatina we have had one case, with no death; measles, twenty-seven cases, and varicella one, with no death.

We have had nine deaths from tuberculosis, not one of which was reported, despite frequent requests, until death occurred.

The sewer system has been extended during the past year, and sewer connections are being made as rapidly as the plumbing can be done.

The collection of green garbage has been satisfactorily done, also the other garbage; the difficulty with the latter is that it is not always dumped at the public dumping ground; this is evidently caused by someone exceeding his authority and giving carters and others permission to dump it elsewhere.

The milk supplied the town has been of good quality, clean and cool, but the number of vendors is not nearly as great as in former years.

Our Isolation Hospital, burned last winter, is being repaired, and I hope soon to see it ready for the reception of patients.

WILLIAM BURKE, SANITARY INSPECTOR.

I herewith submit my report for the year ending October 31st, 1917.

The number of contagious diseases reported is as follows:

Typhoid fever	4
Diphtheria	7
Scarlet fever	1
Measles	27
Chicken-pox	2

Quarantine was established when necessary, and premises fumigated as required.

The houses on the streets on which sewers have been recently constructed are being generally connected with the system.

Forty-four samples of milk were collected from the several vendors for examination and testing by the Medical Officer of Health.

The butcher shops and bakeries have been inspected from time to time and found clean and sanitary.

The garbage collecting system is working efficiently.

D. MCALPINE, VETERINARY INSPECTOR.

I beg to submit this my annual report for the year ending October 31st, 1917.

The live stock in this district are at the present time free from anything of a contagious nature.

Since our last annual meeting we had one outbreak of hog cholera; this was taken charge of by the veterinaries of the Federal Department of Agriculture, and by rigid enforcement of the regulations of the department was confined to the one premises. No cases have appeared since.

The dairy cattle have materially increased in value during the year owing to the greater demand for dairy products, in their various forms, for export; the better prices received for these products is having some effect in improving the conditions under which the cattle are kept, fewer cows were removed from the herds this year than in any of the former inspections, and there has been less complaint with regard to the milk supply.

With reference to the slaughter-houses, they are being used less each year, they have the necessary appliances for carrying out the provisions of the by-law with regard to the cooking of offal, and the regulations are being closely observed.

I have investigated several complaints with regard to the offerings of meat and fowl on the market; in some instances the complaint was well founded, the produce being unfit for food. These complaints were made either by the purchaser or through the Police Department.

GEO. K. DEWEY, SECRETARY.

I beg to submit the following report for the year ending October 31st, 1917.

The number of births registered during the year is 253, of which 135 were males and 118 females.

The number of deaths registered as having occurred in the town is 204, of which number 43 were of persons resident in other municipalities and brought here for treat-

ment, making 161 deaths of persons resident in Brockville, being about 17 per thousand of the population; of this number 77 were males and 84 females. Of the total number of deaths 25 were still-born, 26 under the age of one year, 7 between the ages of 1 and 5, 9 between the ages of 5 and 20, 26 between the ages of 20 and 40, 34 between the ages of 40 and 60, and 78 over 60 years of age.

Samples of water to the number of 33 from the well at the pumping station and service taps, 23 from the intake pipe, and 17 from private wells have been sent to the Provincial Analyst for examination.

The returns required by the Provincial Board have been regularly sent to the Department.

BURLINGTON.

DR. A. H. SPEERS, M.O.H.

I herewith present the annual report of the Board of Health for the Town of Burlington for the year 1917.

Up to the present time there has been no serious outbreak of any of the contagious diseases.

There have been reported six cases of diphtheria, three of which have been laryngeal diphtheria or membraneous croup. Sixteen cases of measles have been reported, eight cases of whooping cough, and three cases of scarlet fever, it having made its entrance into the town at the present time. Adequate precautions are being taken against its spread.

We again feel gratified that during the year there have been no cases of typhoid fever in our town.

As regards nuisances, each nuisance complained of has been promptly investigated by either the Sanitary Inspector or Health Officer and a satisfactory adjustment has been made.

An inspection of the premises of the several milk vendors supplying milk to the town was made, and on the whole were found to be in a satisfactory condition and endeavouring to conform to the regulations of the milk by-law of the town.

The milk is collected from the various farmers by one milk vendor, and nearly all milk supplied is pasteurized before being distributed.

Frequent analysis has been made for butter fat, solids and dirt by Mr. Strong, district representative, and reports have always been satisfactory.

The sewerage system, which was started in the year 1915, is nearing completion and is in operation, a goodly number of the residents having connected up, and I have no doubt, when entirely completed, will give general satisfaction.

The water supply has been tested regularly throughout the year, samples being sent to the laboratory of the Provincial Board of Health, and at no time was the water found to contain impurities sufficient to be at all dangerous.

During the year a mad dog ran at large, biting three children. The head of the dog being sent to Toronto, the brain was found to contain the negri bodies diagnostic of rabies. Immediately the three children were sent to Toronto for the Pasteur treatment.

Nothing has been done with the introduction of a garbage by-law; apparently the Council have been busy with other and weighty matters.

The butcher shops are visited at intervals, and have been found to be in a sanitary condition.

The Health Officer has made inspections of the pupils attending the Central and East End schools twice during the year—in June and December. The scholars were examined for diseased teeth, diseased tonsils and adenoids, which work has been voluntary on the part of the Health Officer. While it has not been made compulsory to have these attended to, it has had a valuable educative effect, and we note a marked improvement in the condition of those children that have had these matters attended to.

COBALT.

DR. T. C. MCLAREN, M.O.H., R. L. O'GORMAN, SECRETARY.

Your Local Board of Health for the Town of Cobalt for the year 1917 beg leave to report as follows on the activities of the Board and of the Medical Officer of Health during the present year.

So far as the general health of the people has been concerned, another good year has been experienced by the health authorities. There were very few cases of contagious diseases, and all of these were confined in each case to the houses in which they originated. There were one or two cases of typhoid fever during the year, the origin of which it has been impossible to ascertain.

The old system of scavenging, whereby the scavenger made a specific charge against each householder or place of business, was discontinued from April 1st, 1917, and a new system, whereby the scavenger took on the responsibility of doing all scavenging work in the town according to By-law No. 335 and received all his remuneration from the municipality, was inaugurated from that date. The contract price for this work was $581.00 per month for the removal and destruction of garbage and night soil, except that he received the sum of $6.00 a day additional during such times as he operated the town incinerator.

While at first difficulties were encountered in the operation of the new system, partly through heavy storms, partly on account of the roadway to the incinerator being poor, and partly for other reasons, it was subsequently found that the new system worked out with reasonable satisfaction.

The water supply of the town, while at times it showed evidences of pollution, was never so contaminated that it became necessary to condemn it.

With a view to minimizing the causes of contamination your Board caused certain houses which in its opinion were too close to the lake to be closed, and the Medical Officer of Health is in hopes that this action will be the cause of remedying any such conditions.

Although all the lakes which comprise the source of water supply to the town are not within the town limits, the Local Board, with the assistance of the Cobalt Water Commission, acquired from the Ontario Government during the year certain specific rights to govern the sanitary conditions in and about these lakes, and we believe that these powers will enable the Board to provide very material protection for the town water supply.

In conclusion we wish to report that the Board of Health held six meetings during the year.

COBOURG.

DR. G. H. FIELD, M.O.H.

I have the honour to submit herewith my report for the year 1917, which will, without taking up too much time or space, give you a synopsis of the health conditions of Cobourg for the year that has just passed.

We have been singularly free from contagious disease during the past twelve months, and with the exception of three or four cases of diphtheria, some few cases of mumps, and four cases of scarlet fever, we have enjoyed an immunity from these scourges of the first few years of life.

No deaths from such diseases have been recorded.

In the matter of typhoid fever, never in the history of the town have we had such a year, there being only six cases of this disease recorded, with no deaths; and we must congratulate ourselves upon this fact, which shows that with our sewage and water systems on a sanitary basis we have at last achieved an enviable position in this respect.

Typhoid fever is the index of the sanitary status of any municipality, and looking back on our record for 1917 we would appear to have achieved that most desirable state where we can consider typhoid fever a negligible disease as far as Cobourg is concerned.

During 1917 there were in the town of Cobourg 88 deaths, 52 marriages and 91 births.

This includes the death returns from the House of Refuge, where, owing to the age of the inmates, who come from all over the county, there is to be expected quite a mortality.

With the Cobourg Asylum and House of Refuge both in active operation here during 1916, the total number of deaths was 100, or 12 more than this year, which discrepancy is to be accounted for by the changing of the Cobourg Asylum into a Hospital for Returned Soldiers, where the death rate would naturally be much lower.

As a matter of fact only one death at the Cobourg Military Hosiptal is recorded for the year 1917.

After deducting all extraneous and institutional deaths, we have left for the town of Cobourg a practical death rate of 1.5 per 1,000, which reflects most creditably upon the health conditions of the town.

In the matter of tuberculosis I am glad to report a most marked improvement in the statistics, as during the twelve months of 1917 only one death from pulmonary tuberculosis is recorded, which is highly gratifying, indicating, as it does, a very marked improvement over prevous years.

During 1916 we had five deaths from this cause. With conditions and with our improved lighting with incandescent lamps, properly spaced and placed, we have much to congratulate ourselves in the outlook for 1918, and in spite of the adverse circumstances imposed by the great war which has so disorganized all natural and normal conditions, we, in the old town of Cobourg, must say that, besides sending so many of our loyal citizens to the front to battle for what is right, have been able to keep the flag flying here as well, and to not maintain but to improve the sanitary and hygienic condition of the town.

The Cobourg Hospital has done excellent work for the year and has been a great boon to the military forces being recruited when acute illnesses have stricken down here and there some member of the Cobourg Heavy Battery drafts or the other units stationed in the town.

During the four years of the war, with all the various units and battalions, etc., raising men here, only one death has occurred at the Cobourg Cottage Hospital among these men recruited who have been under treatment at that institution.

In the matter of garbage disposal and the erection of an isolation hospital, I would again urge the necessity for these things and would recommend that the Council take these matters up at their earliest convenience, as both would facilitate the handling of sanitary matters in Cobourg.

I wish to thank you for your hearty support and consideration during the past year, and trust that this report will meet with your approval and endorsation.

CORNWALL.

Dr. J. C. Hamilton, M.O.H.

I beg to submit herewith the annual report of the Medical Health Officer of the Town of Cornwall for the year 1917, as required by the Public Health Act.

After the inauguration of the Board, the Municipal Council, at its first meeting, saw fit, on the recommendation of the members, to arrange with two of the policemen to act as Sanitary Inspectors, and from the fact that their duties require them to be practically over the whole municipality, their dual position of policeman and Sanitary Inspector affords them a first-class opportunity of making at all times a very thorough inspection of the sanitary condition of the town.

In the early months of the year the town was visited by a very general attack of measles, many of the cases being brought into the municipality by the military men who had been recruited and stationed within the municipality. Nearly all these cases were quarantined in a military hospital, and in no way conflicted with matters of health in connection with the Town.

We had, also, in the early months of the year, a very general epidemic of whooping cough, necessitating, as the members of the Board will remember, the closing of the schools for a few days. Although many of these cases were reported to the Medical Health Officer, I feel that a great number were concealed, and, therefore, the epidemic was longer in its subsidence than otherwise would have happened.

Diphtheria, also, showed itself very freely in some 20 or 30 cases, but with the exception of three or four fatal cases, the balance recovered without any ill effects.

Typhoid fever numbered some 10 or 15 cases, with three deaths. The majority of these cases came from without the municipality, and were not due to any infection which might have been caused by improper drainage, or other unsanitary conditions of the town.

In the month of August there was a very sharp, but local, epidemic of infantile paralysis, some ten cases in all, and with the exception of two cases, the disease was confined to a small area of the town in the East End. There was but one fatal case, and that in an adult, the balance recovering, and in some cases the paralytic symptoms were greatly improved. It is, however, yet too early to say whether the paralytic symptoms will entirely disappear.

In all these contagious cases, strict quarantine and placarding, with subsequent thorough fumigation, were very carefully carried out.

The water system of the town has, as in former years, been increased in its area, as also the sewerage system, extending these comforts more generally to the citizens.

The Board of Health also took up the matter of the storage of hides, compelling all persons, before storing hides, to have the place inspected and a permit granted to the party wishing to establish such a place.

With the exception of one case, all have complied with the requirements of the law. Unfortunately, in this single case, after using all reasonable means to persuade the party to comply with the law, I was obliged to lay an information against him before the police magistrate for the infraction of the by-law, causing him to be fined $100.00 and costs.

I regret exceedingly having had to resort to this measure, but the place was a perfect nuisance and the citizens complaining bitterly, and I felt that I had no alternative.

I also wish to express my appreciation of the manner in which the local medical men have aided me in carrying out the provisions of the Health Act by careful notification of all cases of contagious diseases. Taking into consideration the number of cases of contagious diseases which have appeared in the municipality during the year, I feel that I can safely say that we have been more than fortunate as far as fatalities are concerned.

As in former years, I must again draw the attention of the Board to the fact that the Municipal Council have not seen fit to provide an Isolation Hospital. If such were provided, it would be much easier to cope with the epidemics as they present themselves.

The Provincial Board has continued to furnish the Medical Health Officer with all kinds of serum for the treatment of the various contagious diseases, and has instructed him to supply the medical men with all that they require, and as they are furnished to the municipality free of charge, they have greatly diminished the expense to the citizens, particularly amongst the poor, of the proper treatment of the various contagious diseases.

The Public School Board have instituted a thorough system of inspection of the pupils by a trained nurse, acting in conjunction with the Victorian order. This has been the means of bringing before the parents of children the various throat and other infantile troubles to which children are liable, and of giving them an opportunity to consult their family physician and have such treatment carried out as would in the beginning be most serviceable and beneficial to the child.

At the beginning it met with slight opposition, but as parents realize the benefit of this work they are beginning to appreciate it more thoroughly, and in time it will be the means of greatly improving the health of young children attending the schools.

Summary of Contagious Diseases.

	Cases.	Deaths.
Diphtheria	25	4
Typhoid fever	10	3
Measles	20	0
Whooping cough	30	0
Mumps	2	0
Infantile paralysis	10	1 (in an adult)

COCHRANE.

J. A. R. Biron, M.O.H.

The sanitary state of the town of Cochrane has been, in general, very good, during the course of the present year. Accounting the circumstances in which the citizens were left after last year's great conflagration, a great number of them having been unable to construct anew with all required accommodations, notwithstanding this the public health has not suffered in the least, as the following statistics give evidence:

January 15.—One case of diphtheria, the only one during the whole year.

March 21.—One case of meningitis, isolated and non-classical case.

From June 19 to July 26.—Seventeen cases of measles. The disease, occurring at a favourable period, was easily controlled and all complications avoided.

We had two cases of typhoid, one being diagnosed a few days after the arrival of the patient into Cochrane. The other was an ordinary case.

After analysis, the water of our aqueduct has proved to be a safeguard to the population. If the hygienic conditions of Cochrane are to be found thus, it is due to the co-operative work of the local Board of Health, greatly supported by the Municipal Council and the incessant labour of Dr. Fraser to assure the public health of the citizens of this locality.

FORD CITY.

DAMIEN H. PIERCE, M.O.H.

Beg to report number of communicable diseases for the year ending November 30th, 1917.

Disease.	Cases.
Smallpox	1
Scarlet fever	2
Diphtheria	9
Measles	5
Typhoid fever	6

Enclosing herewith annual report of the Medical Officer of Health.

Annual Report of the M.O.H.

The sanitary condition of the town of Ford City, notwithstanding the fact that the municipality has been yet unable to secure a proper sewerage system, is satisfactory.

Dairies.

The dairies within the limits of the town are in good condition. Two of them who did not care to comply with the regulations last year have been ordered to discontinue at once selling milk.

Meat Shops.

Owing to a proper scientific meat and food inspection done under the immediate supervision of Dr. Bowman, the regular meat inspector for the district of Windsor, the public is closely safeguarded as to eatables.

Garbage.

The garbage problem, viz., the disposal of garbage, presents certain difficulties, this being due to the difficulty of securing a proper place to dispose of the vegetable matter. However, steps are now taken to come to an agreement with the neighbouring municipality for the use of the incinerator of the town of Walkerville.

Schools.

Introducing the school nurse inspection has been shown to be a successful proposition. In fact children are now more careful and understand the importance of cleanliness. Epidemics of whatever nature fortunately are not to be registered during the past year.

At last, we still greatly desire to have a system of sewerage in order to protect the public, not only of this municipality, but of the neighbouring towns. With the constant increase of the population in spite of the lack of sewerage accommodation, we surely are exposed to outbreaks of contagious diseases. The public is very anxious to be assured of protection to that effect.

FOREST.

DR. C. A. PATTERSON, M.O.H.

During the year we have had no severe epidemics. Contagious diseases were reported as follows:

Disease.	Cases.
Scarlet fever	1
Mumps	5
Scabies	1
Measles	5
Diphtheria	15
Total	27

No deaths from any of the cases.

Deaths during the year as follows:

Bronchitis	2
Gangrene	1
Pneumonia	4
Apoplexy	3
Tuberculosis	4
Inflammation of bladder	1
Heart failure	1
Cancer—	
Of stomach	1
Of bowels	1
Of liver	1
Diabetes	1
Rheumatism	1
Accidentally killed	1
Total	22

Births during the year, 24.

During the year numerous complaints of a minor nature have been dealt with by your Health Officer, and conditions satisfactorily remedied. A number of visits were made at various times during the year to both schools, and inspections made. Both schools are in a splendid sanitary condition. Our School Nurse has made regular inspections once per month of the eyes, throat, teeth, etc., of the public school pupils, and all suspicious cases of any communicable disease reported to the Board. Numbers of children have had their tonsils, teeth, etc., attended to as a result.

The board held five meetings during the year.

Negotiations were entered into with the G.T.R., whereby conditions on their property detrimental to health are now being attended to by them. The regulations regarding manure and outside closets are being well kept.

The Provincial Engineer visited Forest during the year in respect to the sewage disposal of the canning factory and the flax mill. No change has as yet been made in these places.

During the year the Board has distributed some fifty or sixty diagnostic outfits, as well as about ninety doses of diphtheria antitoxin, one dose of tetanus, and a number of doses of pertussis vaccine and smallpox vaccine.

Some complaints regarding the milk supply were received, and samples of the milk were sent to Toronto for analysis and the condition remedied, it occurring with only one dealer who has not a bottling system, no trouble having occurred with the bottling system.

On the whole, beg to report the sanitary condition and health of the town good. Our population being about 1,800, and the number of deaths 22, it gives us a death rate of about 12.2 per 1,000, which is low in comparison with the average throughout the Province.

FORT FRANCES.

DR. R. MOORE, M.O.H., J. W. WALKER, SECRETARY.

The Local Board of Health make the following report for the year 1917:

During the year matters connected with the Board have run along in a normal course. The collection of garbage and refuse has been done in the same manner as formerly, by team owned and operated by municipality, material being taken to the incinerator and burned.

A number of water and sewer connections were made, but there are still many places not served by these conveniences, even where they are available.

Water tests were made at various intervals, and, while showing no serious trouble, the Department insists in every report that there must be no carelessness regarding chlorination.

Milk tests also made showed that while satisfactory in so far as butter fat was concerned, the cleanliness of the milk was not what it should have been. This point was strongly commented upon by the District Officer on his visit to the municipality.

The general health of the community during the year has been very good.

Below are given the statistics for the year as reported to the Secretary.

Months.	Scarlet Fever.	Mumps.	Measles.	Duke's Disease.	Tuberculosis.	Typhoid.	Smallpox.	Chickenpox.	Diphtheria.	Total.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	4	1	.....	.....	.....	.....	.....	.....	.....	5
March	29	6	3	1	2	.....	.....	.....	.....	41
April	9	1	2	.....	.....	.....	.....	.....	.....	12
May	9	2	1	.....	.....	1	.....	.....	.....	13
June	3	.....	1	.....	.....	.....	1	.....	.....	5
July	.....	.....	2	.....	.....	2	.....	2	.....	6
August	.....	.....	4	.....	.....	.....	.....	.....	.....	4
September	.....	.....	1	.....	.....	.....	.....	.....	.....	1
October	.....	.....	12	.....	.....	.....	.....	.....	1	13
November	.....	.....	33	.....	.....	.....	.....	.....	.....	33
December	.....	.....	6	.....	.....	1	.....	.....	.....	7
	54	10	65	1	2	4	1	2	1	140

Vital Statistics.

Births—(In municipality), 54 males, 47 females.
(In unorganized district), 4 males, 1 female.

Deaths—

Cause.	Number in municipality.	Number in unorganized territory.
Accident	5	8
Prematurity and other similar causes	14	2
Pneumonia	1	1
Tuberculosis	3	..
Tubercular peritonitis	1	..
Cancer	2	..
Gangrene (due to accident)	1	..
Meningitis	1	..
Cerebral hemorrhage	1	..
Acute laryngitis	1	..
Arterio-sclerosis	1	..
Dysentery, etc.	2	..
Bright's disease	1	..
Peritonitis	1	..
Nephritis	..	1
Quinsy	..	1
Apoplexy	..	1
Total	35	14

Marriages, 38.

GEORGETOWN.

DR. JOSEPH MCANDREW, M.O.H.

I am glad to be able to report that the year 1917 has been an exceptionally healthy one as far as Georgetown is concerned. There have been no epidemics whatever, and very few communicable diseases, and of these the majority of the cases were left-overs from 1916.

I am also pleased to report that several if not all our last year's suggestions have been carried out, namely, a more liberal watering of the streets, the passing of a milk by-law, the cleaning up and cultivating of the vacant lots, etc., all of which conduces to the good health of the community.

Of course, there have been some few complaints as to existing nuisances, but these have been immediately attended to and the sanitary conditions carefully looked after by the Inspector.

The following were the communicable diseases reported for the year.

January—10 cases German measles.
February—3 cases scarlet fever.
September—1 case diphtheria.
November—1 case diphtheria.
December—5 cases chicken-pox, 1 case whooping cough, 2 cases tuberculosis.

TOWNSHIP OF GUELPH.

Dr. H. G. Roberts, M.O.H.

Your Local Board of Health beg leave to report as follows: The very unsatisfactory conditions at the City of Guelph Sewerage Farm, which existed at the time of making our annual report of last year, must, we regret very much to say, be featured again this year. The City Sewerage Farm and Filter Beds are, as they have been ever since their installation, a menace to the health of those living in the neighborhood of the river below that place. As the result of a conference held with the City Sewerage and Works Commission on November 20th last, attended by the whole of our Board, the whole question of the present system of sewerage disposal was gone into fully. On November 27th, 1916, the City Clerk wrote your secretary stating what they proposed doing in the way of improving their plant and filter beds, claiming no negligence on their part; asking the indulgence of the township authorities for a short time in order to perfect their arrangements, and assuring us that "Everything will be done in the meantime to make the present plant operate to the best possible advantage." In the meantime, on May 4th, conditions did not improve, and at a meeting of our Board we invited the City Board to accompany us on a visit of inspection that afternoon. Mayor Newstead, Chairman Kelly and Engineer McArthur accepted our invitation. On our arrival we found a large opening in the main sewer a short distance above the tanks from which the raw sewage was pouring out and spreading over the flats and finally finding its way to the river. The explanation offered for this opening in the main sewer was that it is a sort of safety valve to protect the plant in case of flood. This same flooded condition was found on many occasions during the season; in fact little or no effort seems to be made to prevent absolutely raw sewage from running direct into the river. On June 1st Mr. Jeffrey wrote the Board stating that he had been instructed by N. W. Buchanan to take such steps as might be necessary to protect his interests. City connections are still being made, thus increasing the flow of sewage to the tanks and beds and nothing whatever to provide better conditions and capacity to handle the extra quantity coming. The Buchanan complaint was temporarily withheld pending some action being taken by the Board, who seem either hopelessly dilatory or unable to deal with the situation. We have now come to a point when patience ceases to be a virtue, and unless some genuine effort is made by the City Board we will be compelled to take action in law to protect ourselves and the community we represent.

We regret having to take this step. Long and patiently have we borne up under this unneighbourly act until we do not propose to put up with being jollied along any further, and have been forced by the inaction of the City Board to assert and establish our rights.

In May a circular letter was sent to every householder in the township through the medium of the schools, asking their co-operation in the matter of a general clean-up on their premises to ensure better sanitary conditions in the township.

Vital statistics taken from returns made to the Registrar are as follows:

Deaths—51 male and 31 female	82
Births—41 male and 38 female	79

We would recommend the payment of the following accounts:

Dr. Roberts, M.O.H.	$60 00
Wm. Young, Sanitary Inspector	60 00
Wm. Young, horse hire and disinfecting	4 00
George McIntosh, attending seven meetings	14 00
Wm. Laidlaw, attending seven meetings	14 00
Jas. Laidlaw, attending seven meetings	14 00
Jas. Laidlaw, horse hire and delivering notices, etc.	6 00
Alex. Stewart, disinfectants	25 50

Report of the M.O.H.

I beg leave to submit the following report of the health of the people of Guelph Township for the current year. This year the township has been singularly free of epidemics of the infectious diseases, such as scarlet fever, measles, whooping cough and diphtheria. In proximity to the city there is bound to be more or less extension of infection into the country, but in no case did it become an epidemic. Lately we had an outbreak of diphtheria in S. Sec. No. 4½, resulting in one death, but by strict observance of quarantine and the free use of antitoxin in children who were exposed to the infection there were no further developments and it was confined to the one family. We would respectfully call the attention of the people of the township to exercise a watchfulness over their children when complaining of sore throats, especially during the fall and winter months. If patches of membrane appear on the tonsils, or if croupiness persists for some time, they had better call in a doctor. In antitoxin we have a specific—a sure cure—for diphtheria if it is used early in the disease; all will recover if used in time. It is free for everybody, as it is supplied by the government.

The city sewage disposal plant installed in our township some fifteen years ago has been, and is, a source of continual worry to your Board of Health. The city at that time solemnly entered into an agreement with the township, and amongst other things agreed not to pollute the waters of the River Speed. Through the faulty working of their plant raw sewage is continually finding its way into the stream, and the agreement with the township is completely ignored. The septic tanks and the filter beds should be sufficient to handle the domestic sewage of a city the size of Guelph and have a clear affluent if the main sewers had been properly constructed, but on account of the loose joints the surface water finds its way into the main sewers and when the weather is wet they are filled to their greatest capacity and they have either to let the raw sewage run directly into the river or have their sewerage beds torn to pieces. They don't choose the latter, but pollute the stream. Your Board feel their responsibility in trying to safeguard the township's rights and have continually complained to the city authorities and pointed out the breach of agreement until forbearance has ceased to be a virtue and we feel that some stronger measures must be resorted to in order to abate the intolerable nuisance. As new main sewers are extended and new streets are opened up the condition every year is getting worse.

WM. YOUNG, SANITARY INSPECTOR.

In presenting this my report for the year 1917, I have to congratulate you and the inhabitants of the township on the good health and exceptionally few outbreaks of contagious diseases that have existed in our midst during the present year, and I am glad to report that whenever any such cases have been reported or came to the notice of your Medical Officer of Health prompt action was at once taken by him and myself to prevent its spread and effectually stamp it out with as little expense and inconvenience to the families affected as possible.

I have received fewer complaints of existing nuisances during the present year than in former years, all of which was satisfactorily abated, with the exception of the one at the Guelph City Disposal Works, which still continues to grow much worse. The city officials in charge of this plant during the present year have been constantly making more connection, which brings down a much larger volume of sewage with no additions to the filtering plant to handle it, and the result was that it threatened to wash out and destroy the whole plant, and to prevent this being done large quantities of unfiltered sewage have to be discharged direct from the septic tanks into the river, which in my opinion must have the effect of polluting the river water to a dangerous extent. The river water is also being much polluted from sewage that gets into the storm drain that empties into the river at the south end of Wellington Street. On the fourth of June last I took five samples of water from the filtering plant, and from the river above and below the plant, and forwarded them to the Provincial Laboratories for analysis. The reports from same I handed over to your Medical Health Officer for his information.

In concluding my report I would ask you to pardon me if I suggest that you give this matter your most earnest consideration with a view to arriving, at the earliest possible date, at some satisfactory arrangement with the city authorities that will protect the health of the people of this township.

HESPELER.

Dr. A. H. Campbell, M.O.H.

I beg to present to you my fourth annual report for the year 1917 as Medical Officer of Health.

First of all, I am pleased to state that we have a clean bill of health at the present time, when the surrounding towns are reporting so many cases of diphtheria. In fact, we have had to quarantine only one house during the year, and that for a mild case of diphtheria. The only epidemic we have had has been a mild one of chicken-pox, and that now is about over. I feel sure there are few towns the size of Hespeler, that can make a better showing.

Our birth rate is larger this year there being 60 births during the year, with 29 deaths.

Our Secretary reports an increased number using our town water. We have an excellent supply of water, and I feel sure with the increased use of it we will get increased health.

I have had some complaints of there being a good deal of sediment in the water, especially at the far end of Walker Street. I think this could be overcome by allowing the users there to use more water.

Another matter that we have reason to be proud of is our scavenger system. As you know, the town has two complete clean-ups yearly, and partial ones oftener. There was some trouble in the spring with some of the householders, but our efficient Sanitary Inspector was able to fix it up, and now everything is working smoothly.

We have had the milk tested from time to time, and it is gratifying to find that it has always tested up to the standard.

IROQUOIS FALLS.

Dr. C. F. Dorsey, M.O.H.

In the matter of the report of sanitary conditions and matters pertaining to the health of the municipality, I hereby submit the following:

With few exceptions, from a sanitary standpoint our town is one of the best in Canada. Until some arrangements are made for the final disposal of the sewage, we cannot say that our sewerage system is faultless, although this condition is one that is really more detrimental to others than it is to our own citizens, for, so far as we are concerned, everything is disposed of satisfactorily. The water supplied by the town system has analyzed extremely well, and at no time could it be put down as the cause of any epidemic or outbreak of any kind.

The scavenging system has been giving very good satisfaction during the past few months, and at present the refuse is being disposed of by being turned out on William Metcalfe's farm some considerable distance from the town. Until we have some satisfactory style of incinerator there is no use of our trying to dispose of it in town. The old incinerator fell down completely and must be classed as a failure.

The only outstanding unsanitary feature of the municipality at present is the lack of any sewage disposal for that part of the town on which the community houses are built. The outbuildings for these houses are very unsanitary, and should be disposed of and some sewerage connection made to this quarter at once. I intend taking this matter up with the Sanitary Inspector and having these outbuildings removed as soon as the frost will permit, and some satisfactory arrangements made until sewerage connections can be installed.

As you know, during the past winter we have had an outbreak of measles. This was the only epidemic, and it was hardly widespread enough to have this name applied to it, and by strict quarantining it has been checked, and no other cases have developed for several months. This quarantining may have seemed a hardship to some of the families, but I think the results obtained by it justified the steps I took in this matter.

We had one death from laryngeal diphtheria, but this was not seen sufficiently soon to take proper steps to save it, although any further outbreak in the family was kept in check by the immediate use of large quantities of antitoxin.

The percentage of births in town according to population have been abnormally large, and the deaths, from all causes, have been abnormally small, there being forty-four births and nine deaths. The comparison between deaths and births in the above figures is even better than the figures would indicate at first glance, as the number of deaths at the hospital amongst non-residents of the town is far in excess of the number of births from the same source, thus making the ratio of births to deaths considerably higher amongst those ordinarily resident in town.

Before closing I would earnestly request all citizens to co-operate towards keeping up the reputation of our town from a sanitary standpoint. This can be done by using extra care in disposing of refuse from the houses, camps, etc., and seeing that everything of this nature is put only into the receptacles provided for this purpose. If the dish-water and such like were disposed of in the kitchen sinks instead of being thrown out of the back doors it would go a long way towards keeping down the number of house flies during the summer months. A good many people do not realize this, although in every other respect their house surroundings are very clean. However, there are an immense number of flies which are attracted to back doors by the dish water and other liquid refuse which are thrown out. Keeping the lids on the garbage cans would also assist in this connection. These are really of more importance than one would think on a casual viewing of the matter, but it is a fact that a good many diseases are brought by the common, ordinary house fly, and anything we can do to remedy this will be time well spent.

Just one other matter where the citizens in general can be of assistance. Although our filtering system is of ample capacity to supply the needs of the town under normal conditions, it is being taxed to its utmost limit by the wastage of large quantities of filtered water through leaving kitchen and other taps running when not in use. This has the effect of running the water through the filters too quickly, thus making them unable to supply water of the same purity as they would otherwise do.

KEEWATIN.

Dr. E. Baker, M.O.H.

In compliance with the requirements of the Public Health Act I hereby submit to you my annual report for the year ending December 1st, 1917, and I shall mention briefly the conditions with which we have had to deal during the year. The general health of the community, outside of the outbreaks of contagious disease, has been fairly good. During the year seven deaths were reported as follows: From cerebral softening, 1; infantile convulsions, 1; broncho-pneumonia, 1; whooping cough, 2; locomotor ataxia, 1; and scarlet fever, 1.

Epidemics.

On March 22nd, 1917, measles was discovered in the homes of four different families, and before the epidemic was controlled thirty-seven families were quarantined, the last being on the twenty-first day of May.

It was found conclusively to have originated in the military camp stationed at Port Arthur and was unfortunately brought to Keewatin by some of its members who were visiting their homes here. Similarly to the epidemic of 1915, the original cases were not discovered until the disease had gotten into the schools, when all hope of checking its spread was lost.

The only possible hope of preventing an epidemic of measles rests in the discovery and proper handling of the first case, before there has been any possibility of contact with others. Failing in this, one need not look for success.

We had example of the above. In the latter part of January, a woman of our town visited Ignace, her two little girls accompanying her. Two or three days after her return the children contracted measles. The father was away, no stranger had been in the house, neither had any one of the family been out of their own home after their return. The place was placed under strict quarantine for three weeks, after which the house was thoroughly fumigated and cleaned, and no new cases developed.

They have had the same difficulty in controlling measles in every municipality in Ontario where the disease has occurred.

On September 6th, 1917 a Kenora physician reported a case of scarlet fever at the home of Martin Skillen. Between September 6th, 1917, and November 2nd, 1917, the disease spread to the homes of twelve other families. There were no developments from the latter date until November 15th, 1917, when a fresh outbreak started, and subsequently six other families have been quarantined to date.

Scarlet fever, although a more serious condition, is not so contagious as measles, and its control depends on the vigilance of the health authorities, the education of the public on all points concerning the symptoms of the disease, and the honesty of the people of the community.

The Provincial authorities tell us that where the disease continues to spread, it is because of the so-called missed cases.

People dread the six weeks quarantine, and will in some instances stop at nothing to conceal a case, and if it be a mild case in an infant or one of the younger members

of the family under school age, will not report the case so long as they think the child will recover without the doctor's aid, and will viciously allow the other members of the family to attend school and infect all those with whom they come in contact. This is the way the authorities claim the disease is spread.

After the last outbreak the school was fumigated, and floors, seats, desks and woodwork thoroughly scrubbed, and teachers and pupils given to understand what their duty is, as well as that of the parents, in regard to the apprehension of early symptoms in children, and reporting the same forthwith to the Medical Officer of Health, and the punishment to which the householder is liable in case he or she fail to do so.

In the month of July a woman from another province, whose children had been exposed to whooping cough, visited Keewatin. While here the children developed the disease, which spread to other homes and as a result two deaths occurred; an excellent opportunity for a judicious person to have apprehended the serious consequences of a visit under such circumstances and the saving of two lives.

I might say that people coming here from western provinces seem to have a vague conception of what their duty is in regard to carrying out laws of health. Whether the health regulations are lax, or the proper education of the people in this line neglected, I do not know. However, they seem to take liberties and do things that would not be tolerated in this province. No new cases of tuberculosis were reported during the year, and we are proud to state that typhoid fever is becoming a thing of the past in Keewatin, not one case having occurred during the year.

Clean milk of a good quality was sold by the milk vendors during the year, and although in some instances the surroundings, apparatus for cooling, storing, etc., and stabling of cattle, were superior to others, yet on the whole the milk business was satisfactory.

The Cow By-law, which was considered a hardship at the outset, is now generally conceded to be the only way to handle the situation.

The cleanliness, tidiness and general improvements made in homes and premises during the year, all of which contribute to the health of our town, is worthy of mention, when we compare the general appearance of the present Keewatin with that of the Keewatin of twelve years ago. I think our success in convincing the Council of the necessity of building an Isolation Hospital, and the establishment and municipal control of the garbage and sanitary closet system, will be better assured by a joint meeting of the Municipal Council and the Board of Health in the near future.

KINGSVILLE.

JOHN EARLE JENNER, M.O.H.

I beg to submit my annual report as M.O.H. for the year ending December 1st, 1917.

Communicable Diseases.

With the exception of sore throats, fourteen cases of which were reported as diphtheritic, and two cases of measles, all of which recovered, no other cases of infectious diseases were reported. The usual crop of fly-borne diseases formerly so prevalent among children during the summer months was practically nil, showing the care the citizens are taking to destroy all garbage and breeding places for flies. The propaganda against the spread of contagion of every kind, as carried on largely through distributing literature on the subject through the public schools, is bearing fruit.

The milk supply, I believe, has been uniformly satisfactory. I have not had one single complaint during the year, which is remarkable.

The absolute freedom from typhoid fever is *prima facie* evidence of a relatively pure water supply. The condition of the water has, no doubt, been materially improved by diverting the overflow from numerous cesspools that formerly found its way into the street sewers.

The work of the Sanitary Inspector has been entirely satisfactory; he has shown tact and thoroughness in his work.

I would again call the attention of the Council to the advisability of passing a by-law regulating the disposal of night-soil where cesspools or sanitary tanks are not in operation, and a by-law forbidding the use of vaults and providing for dry earth, fly-proof boxes. This, with our present system of caring for garbage and stable refuse would almost eliminate the danger from flies. It would at least reduce it to a minimum.

Owing to the war demands the District M.O.H. has not been able to devote any time to lectures as in former years. This work has consequently been left to local men.

LINDSAY.

Dr. J. McAlpine, M.O.H.

In submitting my report for the year ending November 15th, 1917, I am pleased to report that the town has been fairly free from contagious diseases.

The following cases were reported, viz.:

Scarlet fever, 3 cases; all recovered.
Diphtheria, 7 cases; 1 death.
Typhoid fever, 4 cases; all recovered.

Several samples of town water were sent to Toronto for analysis during the year, and each report received stated that the water contained colon bacilli. The Board of Water Commissioners has undertaken to improve the supply by adding five new filters, each having a capacity of 250 gals. per minute, and they hope to have the same in working order by the middle of December.

I am sorry to have to report that the Town Council nor the Water Commissioners have not complied with the numerous and urgent requests your Board has made to them to have the Isolation Hospital supplied with town water. It seems too bad that the Hospital cannot be used owing to the lack of a proper supply of water, after your Board going to the expense of putting in a septic tank and equipping the Hospital with all modern improvements.

MILTON.

Dr. R. K. Anderson, M.O.H.

As Medical Officer of Health for the town of Milton, I beg to submit the following report for 1917:

Infectious Diseases.

	Cases.
Measles	2
Scarlet fever	1
Diphtheria	11
Total	14

No deaths.

Births	38
Marriages	11
Deaths	20

The diphtheria epidemic has been the most serious. It presumably started from an outside source. It spreads by contact. A person may give the disease to others and not have it himself. In other words, he is a carrier and is a menace to the public health. Strict quarantine with attention to the throat until repeated tests prove the absence of the germ is the only remedy.

One such case has been found and is under observation. Patients having the disease will be liberated from quarantine as soon as laboratory tests prove the absence of the bacilli and not at a set time as specified by the Medical Health Act. This may seem unjust to those kept in quarantine longer than others, but the public safety must receive first consideration.

The school has been reopened. It is felt to be useless to keep it closed unless Sunday schools, picture shows and public meetings generally are also prohibited. The epidemic does not warrant this.

Quarantine is the only effective way to prevent the spread of the disease. If citizens would remember this and look promptly after all suspected cases there would be little trouble.

Estimating our population at 2,000, the births show a ratio of 19 to the thousand, which is not high. There were premature births two, and two still-born.

Twenty deaths gives a ratio of 10 in the thousand, which is a good showing. The causes of death were: nephritis, 4; pneumonia, 2; bronchitis, 2; spinal paralysis, 2; still-born, 2; and one each of asthma, mastoid disease, drowning, diabetes, cancer, atheroma; and two premature births.

There is an improvement in the general cleanliness of the town. It is as neat a town as you will find in the Province, with a water supply unexcelled. The surrounding farming community is prosperous and hard to beat. The scenery is picturesque beyond comparison, and we are in the industrial heart of the Province. Why not revive our Board of Trade and advertise our advantages?

We should anticipate *post bellum* depression by increased activity to encourage industries to locate here.

NORTH BAY.

DR. EDGAR BRANDON, M.O.H.

I herewith submit my fifth annual report as Medical Officer of Health of this Municipality. In doing so, I have to report a marked reduction in the number of communicable diseases, there being 72 cases reported as against 112 in 1916 and 397 in 1915. The cases reported are apportioned as follows:

Communicable Diseases.

	1917		1916	
	Cases.	Deaths.	Cases.	Deaths.
Measles	19	.....	18	.....
Scarlet Fever	.....	.....	2	.....
Diphtheria	35	5	37	3
Typhoid	3	1	9	1
Tuberculosis	5	3	7	8
Chickenpox	4	.....	38	.....
German Measles	6	.....	.....	.....
	72	9	112	12

Vital Statistics.

During the year there were:

	1917.	1916.
Deaths	163	115
(Percentage per thousand, 11.6.)		
Births	332	379
(Percentage per thousand, 34.6.)		
Marriages	91	94
(Percentage per thousand, 9.08.)		
Population	9,198	

This is an extraordinarily good showing. Seventy-two communicable disease, with only nine deaths, in a population of 9,198, is a very low death rate from this cause.

Diphtheria.

A small epidemic broke out this fall and was principally confined to children from St. Mary's School. Two or three of the deaths were due to the fact that physicians were not called in at an early stage of the disease, in one case the child being dead on his arrival, the second being so terribly infected that it died a day or so later. The laryngeal form of diphtheria misleads many people and is mistaken for croup and is very rapidly fatal. Parents should call their physicians early in this disease, as antitoxin given early gives quickest results and stops the disease readily. The free antitoxin supplied by the Provincial Board of Health is a great boon, and there is no excuse now for any delay on account of the cost of the remedy.

Typhoid Fever.

There were three cases reported, two of which originated from outside the municipality and were patients in the hospital, one from Desauliniers on the C.N.R. west from here; the second case came from Trout Mills; a third was a carrier in the family. The case that died came from Trout Mills and was a very severe infection, the patient contracting it through a common carrier. The town cases were investigated as to their origin and were definitely ascertained as to the probable condition.

Measles.

Measles occurred rather sporadically this year, as there was no epidemic as in other years. One or two cases came from Toronto and gave it to relatives. Some German measles also occurred. There were no deaths from this cause.

Scarlet Fever.

No cases were reported this year.

Tuberculosis.

Five cases were reported, and there were but three deaths as against eight deaths last year. This still would indicate some improvement, but the "White Plague" still holds its place as the greatest cause of death in this country. Notification of this disease is compulsory, and yet we are convinced that the public are not aware of this fact and are held responsible in law same as for smallpox.

The public should realize that every so-called consumptive, with the tubercle bacilli in his sputum, is a serious menace to the rest of the household, and should use every precaution to prevent communicating this disease to others. The sputum should be carefully taken care of and destroyed, and contact with the infected patient should be avoided as far as possible, thus preventing the introduction of the organisms into new ground.

Whooping Cough.

There were four deaths from this disease, yet not a single case was reported to the Department. This is a highly communicable disease and should be isolated from other children and kept out of schools. Children may be immunized by a vaccine prepared and supplied free to the Boards of Health by the Provincial Laboratories. Thus a child may be protected by vaccination, just the same as against smallpox, and when one realizes that four lives were lost in this municipality due to this disease, and we have a preventive at our disposal, it is a cause for great regret. I would urge parents not to disregard this disease and look upon it lightly, as it is a fatal disease in many epidemics, and as the treatment of the disease by vaccines has improved so much the last few years a great deal of suffering and loss of life may be saved by prompt care and efficient treatment.

Smallpox.

No cases have occurred in this municipality for several years, but it has been very prevalent west of here at Warren, St. Charles, Verner and Sudbury. The close proximity to these places, and our central point as a railway centre, makes it almost inevitable that sooner or later some case will drop in here. I would therefore draw the attention of the Contingent Committee to the need of having our Isolation Hospital equipment overhauled and ready for any emergency. The present building is too far away, and as the town is still in controversy with the C.N.R. over land damages to the present building site, I would suggest an exchange for one of their town houses would be in order. This would give us a building close at hand, with sewerage, water and lighting facilities. This would assist us materially in handling other communicable diseases as well, as quite often we have cases in boarding-houses or hotels, or people drop into town with some disease requiring isolation and become a burden on others which could be easily cared for if we had the accommodation.

Water.

During the year, we regularly sampled the water from Trout Lake and from the stream emptying into it. During the summer there was a small amount of infection in the water most of the time, but in diluted quantities. We found that Lee's Creek, emptying in near the smelter, was grossly polluted all the time, showing that the area it drains is heavily infected. The effort by Council to gain sanitary control of the area around the lake by means of a private bill from Legislature deserved commendation, and, while it failed, served to stimulate a greater interest in pure water supply. I regret to state that the municipal council of Widdifield has not lived up to their agreement

as to better sanitary supervision of this section. They have not seen to the installation of sanitary buckets for the outside closets, as not one-half of the houses are so equipped. Such as are there have been cleaned by the town's contractor periodically. So far as personal observation goes of both myself and the Sanitary Inspector, we cannot say that there has either been a determined effort on their part to carry out their undertaking any improvement in the sanitary conditions around the head of Trout Lake. We are still of the opinion that the only solution of this problem is by gaining sanitary control by means of a private bill, as attempted last year. The people most vitally interested are ourselves, and we consequently are most likely to see that the sanitary laws are observed and lived up to. We cannot hope to secure from the Widdifield council an enforcement which would be as we desire. They are not as seriously affected, and besides haven't the machinery to carry out the law. I would suggest that the Council re-apply at the next reunion of the Provincial Legislature for the necessary points.

Sewers.

Lateral extensions were approved by the Board of Health on Bell, Durrell, Worthington Street East, Cedar Street, etc. The trunk sewer scheme has been progressing and will this year reach the corner of Worthington Street on Sherbrooke Street. This is a much-needed sewer, and we trust the entire scheme will eventually be realized. This would help considerably in supplying the section in the Wallace Park district with sewers, and particularly if a cross-over be effected with the present storm sewer at the corner of Wyld and Second Avenue. This storm sewer is now being used as a sanitary sewer by many people, and contrary to law, it would appear. Its use could be extended to the corner of O'Brien Street and High Street if the switch were made as suggested. I have mentioned this in previous annual reports, and I believe the Town Engineer has it under consideration. The saving to the municipality would be considerable, as well as reducing the number of outside closets. The removal of night soil and garbage has been carried out under the supervision of the Sanitary Inspector. I wish to congratulate the Council this year upon adopting and putting into operation our repeated suggestion of former years to dump the night soil into the sewers during the months in which it is feasible. This makes a great reduction in the trouble at dumping ground and reduces the danger of contamination from fly infection as well as reducing the trouble over this matter with the township of Widdifield. This is surely a step in advance made in this, which has always given us a good deal of concern for the safety of our citizens against typhoid infection.

Milk and Dairy Inspection.

During the year twenty dairymen registered in compliance with the milk by-law, licenses being granted to seventeen, as against fifteen last year. These were:

Louis Besserer	License No.	49
J. B. Overholt	" "	48
S. Simms	" "	47
G. C. Smyth	" "	46
G. F. Thorne	" "	45
F. E. Longhurst	" "	44
Mrs. Haw	" "	43
A. D. Besserer	" "	42
John Hogan, Powassan	" "	41
Mrs. Stevenson	" "	40
W. F. Clark, Powassan	" "	39
T. K. Purden	" "	38
Mrs. R. Leach	" "	37
E. Eloy	" "	36
Jos. Sabourin	" "	35
Jas. Passmore	" "	34
Chas. Passmore	" "	33

These dairies have been periodically inspected during the year.

Sedimentation tests for dirt and butter fat have been carried out every month, and some cases have been found too dirty and coloured with harmless dye and returned to the producer. From our observation of the dirt test we are forced to the conclusion that sufficient care in milking and bottling is not exercised. Manure and other debris are constantly found, and certainly never got into this food save by careless, indifferent bottling and lack of proper care of cows' udders, flanks and tails. Part of this dirt, probably 50 per cent., is soluble, and cannot possibly be strained out by any known method. Prevention is the only way. The increased cost of this necessary article of diet demands that the producer must needs give a purer, cleaner article. Milk is now

25 per cent. higher than it was last year, and this very sharp increase over last year should bring with it the compensating virtue of being at least cleaner than ever.

I regret that we have not been able to get away further with our tuberculin testing of the herds. As I pointed out in previous years, we were, once the necessary alterations to the by-law were approved by the Minister of Agriculture, entitled to a free inspection by a competent inspector from Ottawa. These have been held up by the Minister pending a conference between producers and the general public. For some reason this has never been held, and so our hands are tied. Personally I feel that this is a matter in which they have no right to be consulted, as I cannot see how the use of milk from tuberculous cows can be tolerated without compelling all dairymen to pasteurize their milk. I would urge on Council the cleaning up of these points of controversy, so that the services of the Dominion Government Veterinary Inspector may be procured and the tuberculin test carried out. I am again pleased to announce a reduction in the number of diseases due to diarrhœa and enteritis in children under two years, there being but two cases, as against nine last year, as against 17 in 1915 and 18 in 1914. This is a cause of death definitely due to infection found in the milk, and a truly preventible disease. I cannot help but feel that this must be partially due, at least, to the fact that from 30 per cent. to 40 per cent. of our milk is now pasteurized, which kills out the organism causing diarrhœa. Certainly the improved condition for dairies from year to year has materially reduced the death rate from this cause.

Market.

A great deal of meat is being handled at the market, and the condition, while improved over former years, is not very sanitary. I am glad the Council has moved to more thoroughly close this make-shift building in. The conditions under which this beef is killed are doubtful. Provincial Sanitary Inspector White investigated some of their conditions in and around Bonfield, and found that very unsanitary means were used, the cattle being killed in the field and the entrails left in the open, with no disposal according to law. No inspection of this meat can be carried out under this system, and it would appear that this method of handling is open to serious question. I am glad to say, as a result of Inspector White's visit, conditions have been much improved. The question of lavatory and toilet facilities for the farmers coming to town, as well as a rest room for them, has not been taken up by the Council as recommended in my last annual report. This is an urgent matter, as well as the need for public lavatory, which could be solved at the same time. Farmers driving long distances, as they do, require such accommodation urgently, and such should be provided by the municipality. The construction of an up-to-date market building centrally located, with such necessary rooms and accommodation, should be seriously considered.

Conclusion.

The work of the year by the Board of Health was somewhat dislocated over the controversy with the Town Council, relative to the appointment of the Sanitary Inspector, two of the old members resigning. Nevertheless the results this year have been satisfactory, and the old members and ex-members have taken a lively, active interest in the public health matters, and Mr. Whitehead has shown a keen desire to co-operate with me in carrying out the different health procedures and has been a willing, pains-taking, active official. Dr. W. E. George and Mr. A. R. White, Provincial Health Official, have very willingly assisted us whenever called upon.

THOS. WHITEHEAD, SANITARY INSPECTOR.

I herewith submit a report of the work done in my department since commencing duties on February 12th, 1917.

I have used every care and precaution possible, where communicable disease was known to exist, also in disinfecting houses and schools and any other places frequented by patients prior to being quarantined.

Garbage System.

The collection of garbage and trade waste is carried on the same as previous years, namely, that of being operated under tariff and governed by by-law. Charges varying from $60.00 to 50 cents per household. The number of customers handed to the clerk for insertion in the collector's roll is 100, the revenue from same being $1,494. Since returning list to clerk, 75 customers have been taken on; out of this 25 have received one service, 50 have had service ranging from one month to six months; the revenue from these would be $114.75. Summary of this work would be:

Number of loads hauled to dump	485
Number of loads manure hauled	49
Number of loads ashes	75
Wood hauled for charitable purposes	14
Dogs picked up on streets or from Police Department, taken to dump and burned	69

In addition, the department moves all street cleanings, accumulations from waste-paper bins, manure from Public Works Stable and Fire Hall weekly, and ashes from Town Hall. I would ask that next year's Council take up at an early date the present system of garbage collection, with a view of having a general levy, say one mill on the dollar, which would pay for two extra teams and equipment and give every household service. I am sure that if this system was adopted it would mean dollars in our rate-payers' pockets as well as placing our town in a more sanitary condition.

Dumping Ground.

On visiting the dumping ground early in the spring, I found the garbage, etc., scattered over a wide area, which took considerable time and expense in cleaning up. There being a high rock behind the dumping ground, a road was made to the top, and a barricade was constructed along the face of the rock, with a slide. All the garbage is now thrown over this barricade or down the slide. Our collectors keep this garbage burning all the time, and there should be very little, if any, cleaning up to be done next year.

Water Supply at Trout Lake.

I have sent 48 samples of water to Provincial Laboratory for analysis for Trout Lake and district. September and October collections showed slight pollution. I am sure Dr. Brandon, M.O.H., will deal with this matter in a more comprehensive manner than I can hope to.

Night Soil Collection at Trout Lake.

On April 1st, 1917, an agreement was reached between the corporation of the town of North Bay and the corporation of the township of Widdifield for the protection of the water supply to North Bay, the town of North Bay agreeing to look after the removal and collection of night soil within the area shown on the plan; the Township agreeing to pay to the Town of North Bay 25 cents per household per month, the Town of North Bay to bear the balance of the expenses of the said disposal. The amount to be paid by the Township to the Town not to exceed $30.00 (thirty dollars) per annum. I did not know of this agreement being reached until I was notified, on August 24th, to have closets cleaned out at Trout Lake. On August 28th, six of these closets were cleaned out by Contractor Vachon, and on my visiting Trout Lake, accompanied by Mr. Angus, I found that most of these places were not supplied with cans and in a very unsanitary condition. On the contractor's next visit he only got 15 cans out of the 24. Since then four notices have been served to have cans installed within three days. Three families have T. Eaton & Co. $7.50 chemical closets, which they strongly object to have emptied by the contractor. I have notified the Township that these chemical closets will require to be emptied along with the others, as parties using them often fail to put in sufficient chemicals to do any good.

Night Soil Disposal.

In June last arrangements were made to have night soil run into manhole of sanitary sewer at south end of Regina Street. A large square funnel with a screen across was produced, a six-inch square door was made in the end of the contractor's wagon, and a 1½-inch hose was supplied. This method of disposal has been working all summer. I have had a large number of complaints *re* cans not being emptied on time; in most cases the scavenger is not to blame; all that is required is extra service; any omission made was speedily rectified.

Plumbing Inspection.

This has been a very quiet year for plumbers. Twelve inspections is all that I have made. On making these inspections I found that the soil pipe had been improperly caulked. This was rectified by the plumber when his attention was drawn to it.

Sanitary Sewers.

There has been very little done in the way of laying down sanitary sewers. About 70 feet of 10-inch sewer was laid on Worthington Street between John Street and Regina Street. The main 30-inch sewer was carried another 400 feet up Sherbrooke Street to Worthington.

Milk Supply.

Forty-two inspections were made of dairy farms which produce milk for human consumption in North Bay. Seventy-seven tests were made and the milk found good both as to fat percentage and cleanliness, the average test for the year being 3.80 B.F., well above the standard required by the Government and by-law, the highest individual test being 6 and the lowest test being 3. Periodical tests were made at railway depot and dairies for the dirt and temperature. Only four gallons were destroyed for being excessively dirty. The daily average quantity of milk sold in the town of North Bay is about 1,325 quarts by the seven licensed vendors. Four of these licensed vendors procure their produce from farms in the surrounding country. Three produce and peddle their own milk. There are twelve people with one or two cows who sell milk in small quantities, and it is a most difficult thing to get them to observe the by-law. They state that they only keep a cow for their own milk supply, or that they give to a friend for the baby, and it is difficult to detect them actually selling it.

Nuisances.

Unsanitary premises	53
Keeping hogs in unsanitary condition	5
Offensive privies	32
Accumulation of manure and no bin	14
Garbage nuisance	13
Unsanitary buildings	2
Unsanitary boarding-house	1
Keeping hides on the premises	1
Other nuisances	20
	141

In connection with notices served for the abatement of nuisances only one case was taken before the magistrate, who allowed this party out on suspended sentence, provided he cleaned up; which was done.

On my frequent visits to the grocery and fruit stores, twenty hampers of peaches, three baskets of plums and one of apples were seized and destroyed.

In conclusion, I may say that while my duties are arduous and often unpleasant, there is a satisfaction in knowing that one is doing something for the health of the community. I wish to thank the chairman and members of the Board of Health, the Mayor and Council, for courtesies extended me. I also beg to thank Dr. Brandon, M.O.H., and Dr. George and A. R. White for the helpful advice they have given me at all times.

REPORT OF THE SECRETARY.

I herewith submit a brief report as Acting Secretary of the Board of Health, for the year 1917.

At the beginning of the year the following persons were identified with the Board: J. T. McDougall, chairman, Dr. Brandon, M.O.H., Mayor T. J. Patton, R. Rankin, and S. J. Cherry. During the summer J. T. McDougall and S. J. Cherry resigned, their places being filled by R. Tyner and R.A. Sheppard, with R. Rankin acting as chairman.

Eight meetings were held, with no outstanding features.

At the regular meeting of the Board held in April the following resolution was put through: "That the Mayor and Council be requested to call a meeting of all parties affected by By-law No. 488, being a by-law instituting the tuberculin test of all cows supplying milk to this municipality." For some reason nothing was done.

Sewers.

At the September meeting of the Local Board the following resolution was put through: That sanitary sewers be laid on the following streets:

On Cassells Street	330 feet.	Estimated cost	$500 00
On Bourke Street	300 feet.	" "	758 00
On Durrill Street	297 feet.	" "	792 00
On Morin Street	750 feet.	" "	2,946 00
Total number of feet	1,677		$4,996 00

Communicable Diseases.

During October there was a slight outbreak of diphtheria, with four deaths, which centred around St. Mary's S. School. This school was thoroughly fumigated on two occasions. Every precaution was used by the Medical Health Officer to stop the spread of this disease, which was successful. At present there are three cases of diphtheria and two cases of measles in town. Dr. Brandon is dealing with the number of contagious disease cases in his annual report. He is also dealing with the water supply at Trout Lake, and sanitary conditions of the town.

In conclusion, I may say that this is a brief summary of the principal items dealt with by the Board for 1917.

ORILLIA.

DR. JOHN MCLEAN, M.O.H.

As you are aware, the Town Council has passed what is described as "a model milk by-law," giving your Board increased control over dairies and the delivery of milk to consumers. The town had a sad and expensive experience early in the summer, attributable to the supply of milk from one dairy being contaminated with typhoid germs. The place was promptly ordered closed, and the result was that the development of any further cases of the disease disappeared. I confidently expect that the additional powers conferred on your Board by the by-law will be fully and carefully enforced for the protection of the public. I freely admit that the majority of the milk dealers do their utmost to give their customers good and wholesome milk, but one who is careless and defiant of sanitary laws can do an incalculable amount of harm. It will be the duty of your Board and its officers to see that there will be no recurrence of such a calamity. Of course, the appointment of the executive officers lies with the town Council.

You must have observed that the number of scarlet fever and diphtheria cases are much in excess of former years.

The Provincial Board of Health, more than a year ago, issued regulations regarding the storing and disposal of manure. The character of the receptacles is plainly defined in the plans and specifications. It has required very much persuasion, and in some cases legal action, to bring many owners of stables to conform with the law; but I think I can safely say, judging from the reports of Inspector Lee, that things are at present in a satisfactory condition.

The water supply is systematically looked after by the Commission. Tests are made at regular intervals, and citizens may rest assured that they are supplied with wholesome if not palatable water.

There are no slaughter-houses in town, and all the meat consumed is brought in from outside points. The transportation has improved markedly in the past year, but it is not yet up to the standard required by the Public Health Act.

The usual crop of complaints regarding overflowing cesspools, improper drainage, keeping of hogs, etc., were dealt with satisfactorily.

Respecting the prevalence of scarlet fever, I have come to the conclusion that owing to the mild type of the disease many cases occurred where no physician was called in, and consequently no steps could be taken by the authorities to isolate the patients and prevent its spread. I would urge upon parents and others interested the necessity of reporting every suspicious case, so that the proper steps could be taken to prevent contagion. Although the type for the last year has been benign, it is impossible to predict how soon it may become malignant, and then the results would be disastrous. I hope this warning will be heeded.

The source of the diphtheritic cases has been very difficult, and in the majority of cases impossible, to trace. There are persons who communicate diphtheria in which the usual symptoms are not manifest. They are called "carriers." The only way by which these can be detected is by a microscopic examination of the secretion of the throat. Therefore, in order to secure immunity from this disease, a careful examination of all suspected persons, particularly factory employees arriving in town from other centres, should be scientifically made.

Owing to the failure of the Council to pass the necessary by-law I could not compel connection with the sewers in instances where I thought it would be of much benefit. I trust the Council will without delay take the proper steps to remedy this undesirable state of affairs.

The Isolation Hospital has been found of great service for the accommodation of contagious diseases. Many cases had to be removed there during the year.

Following is a report of infectious disease and deaths therefrom: Scarlet fever, 24 cases, 1 death; diphtheria, 26 cases, 2 deaths; typhoid fever, 158 cases, 4 deaths; measles, 15 cases; tuberculosis, 2 deaths.

OWEN SOUND.

In compliance with the requirements of the Public Health Act, I herewith submit to you the annual report of matters pertaining to the public health of this municipality for the year 1917.

Dr. Murray, our Medical Officer of Health, is, as you know, at present in France, right up at the front, helping our boys who have the misfortune to be wounded in the great struggle. We are all proud of him, and I am sure I voice your sentiments when I say we wish him a safe and speedy return to his home.

It is my pleasure to report a great deal less trouble with contagious diseases than last year, when we had such a serious time with measles and typhoid fever. This year there were a great many cases of rubella, or so-called German measles, a very mild disease, scarcely worth while quarantining were it not that a mild attack of scarlet fever might be mistaken for it. Of scarlet fever there were but two cases reported, with no deaths. Nine cases of typhoid fever were reported, with one death. There were quite a number of cases of chicken-pox and whooping cough, but these are ever with us to a greater or lesser degree.

With reference to the typhoid fever, there is reason to believe that some of the cases were contracted out of town, but developed here. Frequent analysis of the water was made by the laboratory of the Provincial Board of Health. Mr. C. J. Pratt sent samples from the high and low pressure systems every week or two during the danger period, and the reports were almost uniformly good. The Public Utilities Commission are doing everything in their power to ensure a safe water supply.

The garbage collecting system has worked very satisfactorily, there being very few complaints till lately, when, with the onset of winter, the men seem unable to keep up with the work. The filling in of the marsh lots goes steadily on, gradually disposing of the stagnant frog ponds and mosquito beds, but some of the owners of lots on 3rd Avenue East between 12th and 13th Street are suffering; either the back ends of these lots should be filled in, or drainage should be provided for, as the dumping of garbage has forced the water over on these lots. Filling in seems the best solution of the difficulty, as there is not sufficient fall at this point to provide efficient drainage. I would recommend that the Sanitary Inspector be instructed to interview the above mentioned owners and see if they would not allow the garbage men to fill in the rear of their lots this winter.

The slaughter-houses have been inspected regularly and found in fairly satisfactory condition. As a result of the Board's act last spring, Mr. Boyd's slaughter-house has been put in a much better condition.

The milk tests have shown that a good quality of milk has been delivered to the public. These tests apply only to the dealers using delivery rigs, and not to the smaller dealers with one or two cows; but I would like to take this means of informing the public (as I presume this report will be published as a whole or in part) that Mr. King is ready at any time to test any sample of milk from any source, free of charge.

The Dairy Inspector, Dr. Norton, has found it hard to make some of the producers live up to the milk by-law. As a number of members of this Board visited one of the premises complained of you will appreciate some of the difficulties he experiences. He is asking to-day that one of the vendors be ordered not to purchase milk from one of the producers until the latter has cleaned up his premises as required. Even though the milk supply be short, this Board will have to back up Dr. Norton in his efforts to ensure a clean milk supply, and suspend or cancel permits where necessary. Impure milk is one of the causes of typhoid fever; and it is quite possible that the few cases of this disease that we had this year were due to faulty milk. Better a short supply of pure milk than an abundance of impure.

This fall there has been an unusual number of cases of skin diseases reported from the schools, mostly scabies (itch) and impetigo. Impetigo has not been confined to the schools, but a number of men of shaving age have contracted the disease. This is due to uncleanliness somewhere. Parents feel aggrieved over having their children kept home from school, but it is the only way to prevent the spread of these diseases.

Appended to this report will be found a report of the average milk tests for the year for the principal dealers.

Other than a few cases of whooping cough, I believe the town is free at present from infectious diseases.

AVERAGE OF MILK TESTS FOR THE YEAR 1917.

Vendor.	Fat per cent.	Total solids.
Owen Sound Dairy Co.	3.8	12.19
L. Kivel	3.9	12.24
W. C. Barber	4.3	12.59
R. J. Walters	3.8	12.26

PARRY SOUND.

DR. W. R. MASON, M.O.H.

I have much pleasure in passing on to you the annual report of the Medical Officer of Health, and I think that you will agree with me in saying that he has given us a very comprehensive and business-like statement of matters concerning the health of the town, and that one of the most gratifying items among the many given is the one stating that *not one case of typhoid fever had its origin in the town this year*, and when added to this, that we have no cases of contagious disease at the present time, notwithstanding the crowded condition of the people in many parts of the town, it is certainly a very gratifying and unusual report for Parry Sound.

There are many reasons which might be given why the health of the town has so greatly improved, but the chief reason is, undoubtedly, the fact that the Medical Officer and the Inspector *have been on the job all the time.*

The summary of the Sanitary Survey, which you will find in the report of the Medical Officer, is a very interesting statement of conditions as they exist, and when one for the year 1918 has been made, we will be able for the first time to know positively whether we are making progress or going back, and the knowing of this will aid future Boards in improving the sanitary conditions. I would like to impress upon you, not only the value of such statistics as these, but also the very great amount of work required to gather and arrange the facts in so concise a form. The Board wish you to know that this survey is a record of the sanitary conditions and conveniences of every residence in the town, and next year it will show where improved conditions have been found, as well as where unsatisfactory conditions have been allowed to remain or grow worse. The work of the Medical Officer of Health and the Inspector this year in cleaning the town and in preventing the spreading of contagious diseases is a matter of which the Board of Health is very proud and which you would do well to properly appreciate.

During the year you have caused several residential districts to be drained better than they were before and thus made it possible for the Board to keep these areas in a more sanitary condition.

The milk by-law passed by you is helping to improve the quality of the milk sold in town, and it is intended that the improvement shall continue.

The passing by you of By-law No. 488 is aiding in giving the people fresh fruits and other food-stuffs in better order, but in the opinion of the Board of Health the enforcement of this by-law only tends to alleviate conditions, which to a great extent should not exist, and for this reason the Board hopes that as soon as financial conditions will permit, you will see your way clear to put such a surface on those portions of our streets lying in front of the chief stores dealing in food stuffs as will make it possible to keep them entirely free from dust and filth. If this cannot be done next year, then some efficient method of street cleaning and, if possible, of preventing the scattering of paper and other things on the street, should be adopted.

The inspection of slaughter-houses has shown that they are in a fair state of cleanliness, but conditions have lately arisen which should make it necessary to consider some method of inspection of animals which are to be killed. It is time that the public was given some reasonable assurance that all meat offered for sale in town was made from animals that were not suffering from some disgusting disease.

The Board asked you early in the year to take steps to secure a report as to the best source of a permanent water supply, and are pleased to know that you have taken such action, but regret very much the seemingly unnecessary delay in the furnishing of such report.

The work this year, outside of making the sanitary survey, has consisted chiefly of attending to innumerable small matters, none of which, taken separately, would have been of much consequence, but which, if left without attention, would have collectively been serious. Perhaps the prompt attention to these little things, as they cropped up, has prevented us from having to deal with more serious conditions.

I am very much pleased to report that the members of the Board have been greatly interested in the work this year and have worked together smoothly and well, trying at all times to improve the sanitary conditions and, by doing this, to make the town more healthy.

It has been a pleasure to preside over a Board that was so willing to do the work for which it was appointed.

Annual Report of M.O.H.

In presenting this report I wish to state that we have had a changing population of anywhere from thirty to forty thousand for the year, owing to the Nobel Works; that we have two hospitals, which care for most of the serious cases from a district miles in extent, and that we are surrounded by a district in which cases of infectious diseases run at large and are a constant menace to us.

The record includes the deaths which occurred in November, 1916, as a result of the epidemic of 1916, the cases having been given in the previous report.

Vital Statistics.

Deaths from all causes, 95. Births, 205.

Deaths from accident		8
Premature and stillbirths		12
Tuberculosis		6
Cancer		3
Typhoid fever	(all in 1916)	3
Diphtheria	(two in 1916)	3
Whooping cough		2
Measles		1
Other couses		57
		95

The death rate is exceptionally small, while the birth rate is exceedingly high, being forty per thousand. This is partly due to cases being brought to hospital from out of town.

CONTAGIOUS DISEASES REPORTED TO MEDICAL OFFICER OF HEALTH.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total.
Typhoid		3				2						2	7
Chickenpox	5	13	18										36
Diphtheria			2							2	1		5
Measles		1	17	12	16	11	28	19	9	2	1		116
Tuberculosis		1					3				2		6
Mumps						1	1	4					6
Whooping cough											3		3

Our typhoid report is much more cheerful than that of last year, when we recorded 26 deaths. During 1917 we have had five cases reported. Two of these cases came direct from Winnipeg and Hull, two were para-typhoids and were better inside of two weeks, and the other did not originate here.

Our water supply has been chlorinated, but in addition to that the discharges from all typhoid cases have been collected and disposed of by us. None have been allowed to get into the lake. If the discharges from typhoid cases do not get into the lake, we will have no cases of typhoid arising from our water supply.

One of the diphtheria cases that died was brought from Point Au Baril.

Of the six cases of tuberculosis, two cases of whooping cough, and one case of measles that died, none were reported to me.

It is satisfactory to know that infectious diseases were better reported this year than last. I hope the time will soon come when the householders or doctors will report each case as it is discovered.

We have had no case of scarlet fever.

Where we have had cases of diphtheria the bread-winner has been kept in or out of the house. This is a hardship on the bread-winner, and it is done to protect the town, so I am going to ask for an allowance of two dollars a day where I think it is justified.

After the spring clean-up I arranged that the sanitary officer should visit all yards and give a certificate to each one whose premises were clean and tidy. While doing this, I concluded that it was necessary to make a sanitary inspection of the whole town, so that we would know just where we stand and what real progress was made from year to year. I began this with the Sanitary Inspector and he completed it. From this survey I have gathered the following, which was gained by a house-to-house canvass, chiefly by the Sanitary Officer.

Residences on Town side	633
Residences on Parry Harbor side	309
Total	942
Population from Seguin Street to lake	659
Population from C.P.R. tracks to lake	623
Population from Seguin to Isabella	2,300
Total on Town side	3,582
Population across river	1,576
Total	5,158
Outskirts, about	342
Estimated population	5,500

Residences and buildings on Town side attached to Town sewer	249	
Residences and buildings on Parry Harbor attached to Town sewer	40	
		289
Residences and buildings on Town side with private sewer	42	
Residences and buildings on P.H. side with private sewer	44	
		86
Residences and buildings with sewer in front but not attached, P.S.	61	
Residences and buildings with sewer in front but not attached, P.H.	21	
		82
Residences and buildings on Town side, with no sewer	316	
Residences and buildings on P.H. side, with no sewer	206	
		522
		979

Indoor closets, (414 and 96)	510
Cesspools	93
Places with bucket closets (182 and 261)	443
Number of buckets in use	732
Box closets	28
Pits	17
Chemical closets	12
Total number of baths	365

Horses, 164; cows, 71, manure boxes, 62; dogs, 107.

The contents of over four hundred closets run into the Seguin River and the lake. The Seguin River is nothing more than an open cesspool, getting worse all the time. About one hundred closets and baths run into cesspools, which are in many cases common nuisances.

Four hundred and forty-three houses have buckets, and you can be sure that all the slops and all the urine saturate the back yards. Out of 979 residences and buildings, only 289 are on the town sewer.

My purpose is to get rid of all the box and pit closets at once. They exist contrary to law.

Next, get sewers on streets where they are needed, and get the houses connected. This will rid us of the bucket closet, which, though much better than a pit or box closet, is a filthy method in most cases. Going at it systematically, we can get the town decently drained.

This will aggravate the difficulty with our drinking water. On one side will be huge quantities of sewage flowing into the lake; on the other the four streams from the chemical plant; and, all around, the drainage from Waubeek Street; while in the

middle we take our drinking water, add four pounds of bleaching powder every seven hours and take our chances.

A new water supply and sewage system are the two great needs of Parry Sound.

We need a proper isolation hospital. It need not be expensive. One built near one of the hospitals can be run economically when needed and will cost nothing when not needed.

A public lavatory is necessary. One in connection with a public building would be most satisfactory. I would advise having a public library, and in connection with it a lavatory for men and one for women. We could go about getting the library in the usual way.

We have now a satisfactory ambulance.

The bathing beach was used considerably, and the expense I asked for last year was justified.

The waste-paper cans asked for last year and this year have not been supplied. Some systematic arrangement will have to be made for cleaning our streets and collecting the garbage and refuse from the yards.

During the winter, I intend, with the Sanitary Officer, to see how the milk supplied to the town is handled. In the summer, while the cows were on pasture, the stables were not used.

I cannot speak too highly of the services of our Sanitary Inspector. His work is not always pleasant, but it is always done. Not many nuisances escape him. He is becoming more valuable to the town each year, and his services are, I am sure, appreciated by the Board.

In closing, I am pleased to be able to report that there is, to my knowledge, no case of typhoid, scarlet fever, diphtheria or other contagious disease within the municipality.

O. J. Crockford, Sanitary Inspector.

I beg leave to submit for your consideration my annual report as Sanitary Inspector of the town of Parry Sound for the year ending October 31st, 1917.

I am pleased to be able to report to you that we have had a reasonably clean and healthy town during the year. It is true that much remains to be done in the field of sanitation, but I am sure that you will agree with me that we are progressing.

We have been able to have three of our streets laid with a sewer, which has enabled us to get rid of some nuisances, and the construction of more sewers will also clear up a large number of unsanitary conditions, such as cesspools which are being built in ground which will not admit of soakage and are a continual source of danger.

The question of proper garbage collection is another thing which we have not got yet which would remove a large number of nuisances if we had a system of collection. Dairies and cow-barns have received attention during the year. In several instances improvements have been made, but we are still looking for more. Under our new by-law, which we put in force on the 26th day of June, milk test made fifty-five.

There were thirty-one copies of the milk by-law distributed, and thirty-four copies of the fruit by-law distributed, which has made a change in handling fruit and other foods. During the year, thirty-eight notices were served for the installation of plumbing, of which thirty-four houses connected with sewer. Plumbing defects, 3.

Two hundred written notices were served in connection with garbage nuisance. Thirty-one written notices were served in connection with manure boxes, which has brought about considerable improvement. Other nuisances, 60.

One hundred and twenty complaints of nuisance which have been removed by educating the people to the requirement of the Public Health Act.

In connection with notices served for the abatement of nuisances, ten cases were taken into court, of which eight were fined. The fines imposed amounted to twelve dollars. The other cases were given longer time to get rid of their nuisances. Ten pounds of butter condemned.

The restaurants have been periodically inspected, and hotels and large boarding-houses have also been inspected and various sanitary defects remedied. Two hundred and forty inspections were made.

All stores are inspected at frequent intervals and, generally speaking, are kept in a cleanly state. Slaughter-houses inspected at frequent intervals, and find some of them very well kept.

In connection with infectious diseases, five houses placarded for diphtheria, to which ninety visits were made. One hundred and sixteen houses placarded for measles, to which three hundred visits were made. Fifty visits were made in connection with other diseases.

A marked improvement is to be seen in the condition of the yards in some sections, also in the protection from dust and flies of food-stuffs.

Another improvement worthy of notice is the removal of night soil from outside

closets. I should like you to recommend some measures to govern the keeping of poultry and horses, which at present are the source of many complaints. I should like to see some steps taken to compel restaurants to have wash basins for the use of their customers. Also a proper system of garbage collection and a public lavatory installed which would make a great improvement in the sanitary condition of the town next year.

Beside my other work, I made a house-to-house canvass to find out the standing of the town in regard to the sanitary conveniences, of which the M.O.H. will give the result in his report.

In conclusion, I should like to express my appreciation of the support and encouragement I have received from the Medical Health Officer and the Board of Health and Town Council in measures I have brought before them affecting the public health.

PETROLIA.

Dr. R. S. Macalpine, M.O.H.

I hereby submit to you the report of the Board of Health for the year 1917.

The present year has been one in which there has been but very few cases of communicable diseases. The cases reported were as follows: Nine cases of measles, one case of typhoid, and two cases of scarlet fever with one death.

On March 20th your Board made an inspection of the herds from which milk dealers get their supply of milk, and also as to the sanitary condition of the different premises:

The herds were found to be in a healthy condition, and the stables in fairly clean condition.

Several inspections were made of the slaughter-house from which we get the supply of meat, and it was found to be in fairly clean condition. A cement concrete floor has been put in which has made it much easier to keep clean.

Several tests were made of the milk sold by the dealers, and the tests ranged from 3½ to 4 butter fat.

Your Board adopted a different system of disposing of the night soil to that of former years. The plan adopted was by securing a piece of ground just outside the town limits, and instead of treating it with lime and manure, the contractor ploughed it into the soil each night, and the results were all that could be desired. The rate allowed the contractor for removal and ploughing in was 75 cents per barrel.

The amount of money spent by your Board was $238.00.

During the year we held six meetings, besides various consultations.

Report of M.O.H.

I herewith beg to submit my annual report for the town of Petrolia for the year 1917. The extreme lateness of this report will be explained later. I may say that during the entire year we have enjoyed wonderful immunity from contagious and epidemic disease, as the following statistics show:

Measles, 9 cases, mild.
Typhoid, 1 case, imported.
Scarlet fever, 2 cases; 1 death.
Births, 59.
Deaths, 47.

No cases of tuberculosis have been reported. Indeed, I believe only one case of tuberculosis has occurred in several years. We have a very good supply of water from Lake Huron, a distance of fifteen miles, as our record of typhoid would seem to indicate. Except during freshets after heavy rainfalls the quality of water is very good for all purposes. From a sanitary standpoint, we suffer mostly from poor drainage, a lack of interest in keeping backyards cleaned up, accommodation for and the regular removal of stable manure, and the proper disposition of all kinds of garbage. The authorities, however, are giving the matter some attention and improvement is taking place.

The popular slogan of the day is "Win the war." Till this devoutly to be wished object is attained I am afraid sanitation will hardly receive the attention it deserves.

PORT COLBORNE.

Dr. John Shultis, M.O.H.

During the year now drawing to a close I have to report a favourable condition in the health of our village. In the month of January we had eight cases of typhoid fever, the source of which was indefinite, as several examinations of water made by the Provincial Board of Health were pronounced very favourable. An occasional case developed in our village since, but in every instance we considered it contracted from outside sources, as the patients worked out of town.

Several deaths occurred from pulmonary tuberculosis, and after the death of said individuals the premises were disinfected in the manner laid down by the Provincial Board of Health, formalin being used in all cases.

During the year our village was threatened with an epidemic of rabies. A dog so affected was shot and its head sent to the laboratory of the Provincial Board of Health, where it was pronounced affected with the said malady. The Government inspector immediately visited our village, and all dogs were ordered muzzled till all danger was past. Several dogs known to have been fighting with the infected animal were disposed of, and others that had been in their company tied up till all danger was past, the result being no further spread of the dread malady. One girl, eight years old, that had been severely bitten by the rabid dog was sent to Toronto, where she received the Pasteur treatment and returned home in due time in perfect health.

During the year our Council passed a milk by-law, requiring all vendors to secure a license, and the Chief of Police and Medical Health Officer were appointed to look after the premises of all parties supplying milk to our village. The result was numerous visits were made to the premises of the milk supply, and in nearly all cases they were found in a good sanitary condition. Any premises not coming up to the standard were requested to make all changes necessary at once, the result being a very favourable supply of milk was procured for our residents.

The water supply of our municipality is looked after by our Engineer, who takes proper precautions to secure pure water for our inhabitants. He adds chloride of lime to the water in the proportions designated by our Provincial Board of Health, and I must say in every instance where water was taken from the village taps and sent to Toronto for analysis it was pronounced favourable; whereas on several occasions water sent from wells and from canal were pronounced unsafe for use without boiling.

The ice stored and supplied by our ice-houses was inspected at time of procuring, and I must say it certainly did credit to the owners to secure such a good supply, and samples of water taken from the lake where the ice was procured, and sent to Toronto for analysis, was pronounced by the Provincial Analyst as first-class.

Regarding the garbage and night soil collection: it has been looked after satisfactorily to the Board of Health by the Jackson Sanitary Co., all such refuse being removed from the village in properly constructed conveyances prepared for the purpose; the result being a decided improvement in the appearance of our village as well as the health of the community.

Wherever new residences were built and septic tanks installed, such were looked after by our Inspector, Mr. Jackson and observed that such were constructed according to the regulations laid down by the Provincial Board of Health.

The above report covers fairly well the work of the Board during the present year.

PORT HOPE.

Dr. Geo. A. Dickinson, M.O.H.

During the year 1917 the duties of the Chairman of the Board of Health have not been very arduous. All of us were so occupied with the terrible world war that has raged during the last three years that many minor duties of local interest have been pushed to the background.

From the reports of our Medical Officer of Health, which I herewith present to you, I find that, speaking generally, from the sanitary point of view our town is in fairly good shape.

Owing to the impossibility of our Council finding a man to act as scavenger to remove the night soil from outside closets, the town by-law which had been in force for that purpose had to be repealed, so that it is now the duty of every householder having such outside convenience to himself make provision for the work of removal.

Our Sanitary Inspector, whose duty it is to see that this work is done by householders, and that the law is observed, has not yet made any report on the subject, so that I am not in a position to say whether householders are observing the law or not.

In company with the Medical Health Officer I visited a number of the dairy herds from which the town obtains its milk supply, and am very pleased to report to you that these dairy herds are among the very best to be found anywhere in the surrounding district. The dairy barns and the milk houses are well arranged, clean and tidy.

The health of the community, as shown by the report of contagious diseases, has been good, and the death rate has been low.

It has become quite the usual thing for those suffering from serious disease or injury to be removed to the Port Hope Hospital for treatment and nursing, and I cannot close this my short report as Chairman of the Board of Health without commending this course to all those who may require to undergo any surgical operation or need prolonged medical treatment and who may be in need of careful nursing and oversight.

Thanking you gentlemen and the members of the Board of Health for the courtesy you have shown me and for the honour you have conferred upon me as Chairman of the Board of Health, and with all good wishes.

Report of the M.O.H.

During the year ending on November 30th, the premises of all those licensed to sell milk in the town of Port Hope have been regularly inspected. Mr. Wilson, the Chairman of the Board of Health, visited a number of the dairies with me, and he expressed great satisfaction at the good condition of the herds as seen on these visits. We can say without any exaggeration that so far as we are able to judge, the dairies from which Port Hope receives its supply of milk are as good as any herds that can be found in the County of Durham. Port Hope's milk supply is derived from the best herds in the district. Mr. Wilson, I think, knows the farms in the Port Hope district better than any other person in Port Hope, and as valuator, auctioneer and judge of stock and farm property he is well qualified to give an authoritative opinion on the subject. The larger vendors get their milk from a number of different producers, and all these have been visited and inspected throughout the year.

The majority of the dairymen take pride in their well kept premises, and most of them are quick to make any improvements or changes suggested by your inspector. One dairyman who had a good barn but very poor fittings has this summer spent nearly a thousand dollars in cement floors, partitions and other stable furnishings. So that now, with only one or two exceptions among the smaller producers, all the dairies are in good shape.

During the year samples were taken monthly from each of the vendors, and each sample was carefully examined for percentage of butter fat and for dirt sediment. In conversation with the vendors in regard to these examinations much emphasis was placed on the necessity of supplying milk that was as clean as possible, and in this respect the milk has been found very satisfactory. This improvement, we hope, will be permanent.

Since the first day of December, 1916, up to November 30th, 1917, some sixty-five samples of milk have been examined for percentage of butter fat and for dirt sediment. Samples were taken each month throughout the year, the average for the year being 3.34 per cent. of butter fat. No sample was found to be below the three per cent. standard of butter fat, as required by the by-law.

The average percentage for the year was found to be, for each of the principal vendors, as follows, viz.:

H. Zealand	3.24
W. J. Highfield	3.29
T. W. Philp	3.39
J. Sinnott	3.43

The greater part of the milk sold in town is delivered in bottles. This is a very great improvement over delivering in bulk from an open can.

No matter how clean and pure milk is, there are many reasons why it should be boiled before being used. The main reasons for boiling are that milk is a rich animal food and a great many samples of milk contain the germs of tuberculosis; these and other germs live and multiply rapidly in it because the milk is very nourishing, and germs cannot be strained out of milk, but they are very easily destroyed by boiling or pasteurization.

Communicable Diseases.

During the year ending the thirtieth day of November, 1917, there have been reported fifty cases of communicable diseases as follows, viz.:

Diphtheria	26 cases.
Chicken-pox	6 "
Mumps	3 "
Measles	1 "
Typhoid fever	5 "
Whooping cough	6 "
Scarlet fever	2 "
Erysipelas	1 "

No epidemic has occurred during the year.

It will be noted that diphtheria makes up about one-half of the total reported, with but one death. Diphtheria has lost most of its terrors, owing to the very free use of antitoxin in the treatment. To the Provincial Board of Health this great decrease in the death rate from diphtheria is in very great measure due. As a rule there is now no hesitation on the part of physicians in using antitoxin freely and early in every case of the disease. Some physicians go farther than this and use the antitoxin in almost every case of sore throat, even if there be no suspicion of diphtheria. It seems to me that in any community where diphtheria is at all prevalent this should be done, and diphtheria antitoxin should be used in all cases of croup or inflammation of the throat, no matter whether there be suspicion of impending diphtheria or not. A number of cases have occurred in which this practice has been followed, and the evidence thus far obtained has been uniformly favourable.

Only two cases of scarlet fever have occurred in Port Hope during the year, and these were in one family and were quite typical cases of the disease. It was not difficult to trace the source of contagion in these cases, but owing to the very careful management, treatment and isolation any further spread of the disease was prevented.

Only one case of measles was reported, and this happened in a family where the measures recommended were very faithfully followed by all concerned, thus preventing any spread of contagion.

Of the five cases of typhoid fever reported, four of them were treated in the Port Hope hospital, where very careful measures were taken to prevent the spread of the disease. Three of the cases were from out of town. Only two of all the cases were residents of Port Hope.

Of whooping-cough there were six cases, and also six of chicken-pox, with one of erysipelas and three of mumps.

PRESTON.

Dr. J. Scott Hogg, M.O.H.

I beg to submit the following reports of the vital statistics and sanitary condition of the town of Preston for the year ending December 1st, 1917.

Total number of deaths, 55, or 11 per 1,000 of population.

Total number of births, 134, or 26.8 per 1,000.

Causes of death:

Appendicitis and peritonitis	4
Paralysis and apoplexy	3
Heart disease	7
Pneumonia	6
Tuberculosis	2
Glioma of brain	1
Mastoid abscess	1
Cancer	6
Acute capillary bronchitis	2
Gastric ulcer with perforation	1
Drowning	1
Gangrene in foot, with amputation	1
Erysipelas	1
Arterio-sclerosis	1
Convulsions	2

Diphtheria	1
Bright's disease	1
Dysentery in aged	1
Acute intestinal indigestion	2
Entero-colitis	1
Premature births	5
Stillborn	5

We have had two sporadic cases of typhoid, five cases of diphtheria, and slight epidemics of German measles, chicken-pox, whooping cough and measles, all of a mild type and limited in numbers.

The water supply has been of exceptionally good quality, with the exception of a few days when our system became slightly contaminated succeeding a disastrous fire when water of questionable origin was admitted to control this fire.

The milk of the various vendors has been tested from time to time, when it has been found all up to the standard in butter fat and cleanliness.

RENFREW.

Dr. James J. McCann, M.O.H.

I have the honour to submit to you the report of the sanitary condition of the town, and the Health Department for the year, December 1st, 1916, to November 30th, 1917.

There have been reported during the year 100 cases of measles; chicken-pox in 22 families, with a great number of cases not reported; 1 case of cerebro-spinal meningitis; 9 cases of scarlet fever; 17 cases of typhoid fever, with 3 deaths; 16 cases of diphtheria, with one death; 12 cases of mumps.

The typhoid fever was confined almost entirely to one section of the town and to one industrial plant. The disease was not water-borne, but was transmitted entirely by flies, the absence of sewers and presence of out-door closets in the Barnet subdivision being prominent contributing factors. There were in all 177 cases of communicable diseases.

An arrangement with Victoria Hospital *re* nursing charge of the Isolation Hospital was put into effect during the year, with good results. The Isolation Hospital is in need of repairs, which, however, are soon to be made by the Council.

The chemical treatment of the water supply is still carried on, and analyses at various intervals showed it to be satisfactory. A new filter is being added to the present system, so that henceforth the dangerous practice of turning raw water into the mains in the event of fire should be done away with.

During the year there have been 177 births and 74 deaths compared with 136 and 82 respectively last year.

Diagnostic outfits as supplied by the Provincial Board of Health have been distributed to the local physicians, and a supply of antitoxins, serums, etc., is kept on hand and supplied free of charge.

There have been a good number of complaints *re* nuisances, which have been investigated and remedied. The scavenging system is still the cause for numerous complaints. The Board of Health, at Council's request, made a report in September last *re* the solution of the difficulties, but to date it has not been acted upon. The present system is entirely inadequate to the needs of the town, and the number of out-door closets is continually on the increase instead of the reverse. Water and sewage systems should be further extended to the newer parts of the town, and some means ought to be taken to urge or compel property owners to make sewer connection when such is easily accessible.

A garbage collection system has been instituted during the year and is producing good results and should be encouraged and extended.

The District Officer of Health, Dr. Maloney, made an investigation *re* typhoid outbreak and an inspection of the town in September, and reported that the health and sanitary conditions in Renfrew were satisfactory.

I wish to thank the members of the Board, the Secretary and Sanitary Inspector for their assistance and co-operation during the year.

ST. MARY'S.

Dr. J. R. Stanley, M.O.H.

I beg leave to report regarding the work of the Board of Health for the past year and regarding sanitary conditions generally:

1. While contagious diseases have been very prevalent during the year, they have been mostly of the lighter character, such as chicken-pox, German measles and whooping cough. The latter is not generally regarded as a serious disease and placarding is not required. I am of the opinion that in reality it is one of the most serious of children's diseases and one that should be placarded and closely quarantined. A trial is being made by the Provincial authorities of a vaccine which it is to be hoped may prove a benefit in this condition.

2. Of what are usually classed as the more serious of contagious diseases, such as smallpox, diphtheria and infantile paralysis we have been fortunately entirely free; one case of typhoid of uncertain origin has occurred during the year.

3. An analysis of the town water recently taken from a down-town tap shows it to be absolutely free from bacteria, a remarkably satisfactory condition.

4. I have found one or two cases where tenants have not been provided with a proper supply of water and where they have to depend on their neighbours for drinking water. Owners of houses for rent should be made to understand that the Provincial health regulations require that a house owner furnish his tenants with a proper supply of drinking water. Possibly, if publicity were given to this requirement, more drastic methods of remedy might not be required. Further, I think it would not be out of place for the Council to prohibit by by-law the sinking of any new wells within limits supplied by town water, as surface wells and superficial springs within the town are liable to be contaminated.

5. I regard the milk by-law passed by the Council as a very important piece of legislation and do not consider that the amendments suggested will weaken the measure appreciably while they may make it more easily enforced.

6. The scavenger by-law recommended by the Board of Health is, I believe, worthy of very careful consideration. It would be economical to those needing such a service and would pay its own way, while from a health standpoint it would mark a great advance. Next spring may see considerable difficulty in the securing the services of scavengers by the present individual methods.

7. I think no time should be lost in passing a by-law making it compulsory for all citizens installing septic tanks, cesspits, or any other method of sewage disposal, to place plans of the same in the hands of the Clerk to be passed upon by the Medical Health Officer or by some efficient person. Only in this way can any check be kept on the methods of sewage disposal. Lack of some such check has resulted in considerable damage to the town by the use of drains for sewage.

8. The Board of Health has paid considerable attention to the fly nuisance, particularly by insisting on the proper covering of manure from stables. The result has been a considerable diminution in the number of flies. I think next summer this regulation should be even more rigorously enforced.

9. I beg to bear witness to the close attention paid by the members and officers of the Board to their respective duties. The Health Inspector has been hampered in the enforcement of the milk by-law by the changes proposed. Once the by-law is put in satisfactory shape I will expect its enforcement to be carried out faithfully.

SANDWICH.

Dr. W. T. Beasley, M.O.H.

During the year 1917, the town of Sandwich, through the local Board of Health, took all necessary steps to keep the town in a sanitary condition and to safeguard the health of its citizens.

Early in the spring, the usual notices were sent, requesting all householders to clean their yards and put their premises in proper sanitary condition. The Council helped the Board of Health by hiring teams and men to collect and remove all garbage.

The contagious diseases during the year were as follows: Scarlet fever, 3 cases; diphtheria, 7 cases; typhoid, 10 cases; measles, 2 cases; cerebro-spinal meningitis, 1 case; and tuberculosis, 3 cases.

During the year, a few complaints about pigs were received; these were at once investigated and the nuisance, if any, remedied.

One house was condemned as unsanitary and placarded. Two owners were notified to connect premises with sewer for both waste water and sewage.

A capable Milk Inspector was appointed, and licenses were issued to milk dealers only after the Inspector had inspected the premises of the dealer and certified everything satisfactory.

During the year, the Board of Health requested the Council to construct two sewers for sanitary reasons, which request was complied with. The total cost of the sewers constructed by the Council during the year was $35,526.82.

The various members of the Board of Health attended the meetings of the Board very regularly, and dealt efficiently and promptly with the different matters brought before the Board.

SANDWICH EAST.

DR. GUSTAVE LACASSE, M.O.H.

In connection with our Local Board of Health, I beg to report that during the year 1917 the Board met eight times, and aside from the usual routine business the most important matter taken up at those meetings was in dealing with the diphtheria outbreak, the details of which are fully covered in our Health Officer's report.

The diphtheria epidemic is now well under control and we hope to be rid of it within a short time.

Accompanying this report please find a copy of the report made to this Board by Dr. Gustave Lacasse, our Health Officer..

Report of M.O.H.

For the third time I come before you, gentlemen, to give my annual report concerning the health situation in our municipality. Unfortunately the condition this year was the worst of the three and one-half years during which I had the honour to be your executive officer. It is true we had to face a severe epidemic of typhoid in the past, but this year breaks the record. We had to deal with three epidemics, amongst which the fiercest that ever was seen in this vicinity: I mean that diphtheria epidemic which is still sweeping through one of our adjoining municipalities. Following is a tableau summing up the situation for 1917, as far as contagious diseases are concerned:

Contagious Diseases.

Scarlet fever—4 cases reported. No death.
Tuberculosis—2 cases reported. 1 death.
Typhoid fever—3 cases reported. No death.
Anterior polio-myelitis—2 cases reported. 2 deaths.
Measles—Slight epidemic during spring. No complications. No death.
Mumps—Slight epidemic during fall. Beyond control. No death.
Diphtheria—Severe outbreak located mostly in the western part of municipality, Grand Marais, etc. 26 cases reported. 4 deaths.

Particulars.—We finally succeeded in stamping out that last epidemic by closing the school for a few weeks and making a house-to-house investigation, examining in all over 225 throats.

Kindly note that we have to register seven deaths in all. In proportion to the number of cases the percentage is not very low, and imagine how much suffering would be prevented and how many expenses avoided if we had no cases at all. That is the result we should aim at and in this we shall succeed.

First, in studying the causes of the evil, and, second, in using the proper means to get rid of them.

To my mind, here are the principle causes in our locality:

1st. Hiding of suspicious cases, or neglect to report them.

2nd. Inspection of schools and places of public gathering, not scrupulous enough.

3rd. As far as diphtheria is concerned, germ carriers.

You see by that that all of us—teachers, parents and members of this Board—have to take a share of the burden, because we are all guilty on one ground or another; and here are the means:

1st. Detection of suspicious cases and punishment of those who deliberately hide them, or who neglect to report.

2nd. Proper and effective supervision of all schools and public places, with the assistance of a bacteriologist if necessary.

3rd. Detection and immediate isolation of germ carriers.

To the study of those causes, and to the steps to take in order to get rid of them, we shall give our continuous attention, and that is what I, for one, intend to do, especially

this year during that period called the "Canadian Medical Week" that will take place in Hamilton between May 22nd and June 1st, at which will be not only the Ontario Health Officers but also the Canadian Public Health Association, the Ontario Association for the Prevention of Tuberculosis, the Ontario Medical Association and the Canadian Medical Association.

To be fair to a few of the ratepayers of Sandwich East, I wish, before I close this report, to mention a petition signed by about twelve citizens and addressed to our Board, asking "that the Walker people may abate the nuisance provoked by the manure that they allow running from their farm and filling the public ditches, then infecting our drinking well water, and being also a breeding place for innumerable flies, carriers of germs." I confess that I did not act upon it, and here are the reasons: It is admitted on one hand that the diphtheria outbreak came mostly from germ carriers, that is, the persons that, although not being sick themselves, carry the germs in their throat, thus exposing others to the disease, and on the other hand, that not one case of dysentery, which is the real disease caused by a nuisance such as the one above mentioned, was reported. In short, we had our hands full dealing with a condition a good deal more dangerous and that took all our time and effort.

SHALLOW LAKE.

DR. FRANK CAMPBELL, M.O.H. (PRO TEM.).

I herewith submit annual report of work done by the Local Board of Health for the year and the sanitary condition of the village.

The first meeting of the Board was held on February 1st. Mr. L. N. Bird, of the village, was appointed Chairman of the Local Board.

A second meeting of the Local Board was held on March 5th, at which all members were present. A review of the necessary work was given by the M.O.H., and the Sanitary Inspector was instructed to see that same was carried out.

The third meeting of the Board took place on June 4th, and the final meeting on December 20th, when the report of the M.O.H. was received and adopted.

During the year we had only one case of contagious or infectious disease, as reported by the M.O.H.

The sanitary condition of the village was all that could be expected, due to the careful and continuous inspections carried on by the Sanitary Inspector.

Report of the M.O.H.

As you are aware, I assumed the office of your M.O.H. on the first of April, 1917, being *locum tenens* for Dr. Howes, who is now serving his king and country as a military surgeon. Since taking over this office I can report an almost clear bill of health.

No contagious or infectious diseases, with the single exception of one family, the members of which acquired *F. Rubra.* The medical attendant promptly reported, and your local officers had a careful quarantine put in force, and the disease, being thus isolated, made no further progress. So far as I know, not a single case of tuberculosis has been reported in the confines of your village.

In the later part of June I made (as your M.O.H.) my official visit to your public school and examined the throats and oral cavities of the pupils.

I must report that in the senior form, the pupils were almost a unit, in almost complete absence of enlarged tonsils, adenoids, carious teeth, etc.

In the junior form I found that many of the younger pupils had adenoids, a large proportion had carious teeth, and a few had enlarged tonsils. The general public are becoming alive to the dangers which arise from this state of affairs. Many a bright pupil becomes dull and stupid, when the services of an oral surgeon and dentist would remove this condition of affairs.

I must give a good deal of credit for the fairly clean teeth, which I noted in both forms, to the teachers.

The water supply of the village is fairly good, considering that the supply is mainly from open wells.

The Sanitary Inspector is a very careful and efficient official and does his part well. I must here point out, as I have already done, on more than one occasion, the great danger arising from the "pit privy." Your Sanitary Inspector assures me that to this end he is working, so that in the near future, only the "draw" or "box" privy will be the rule.

On the whole, considering that you have no water works, etc., the sanitary condition of the village of Shallow Lake may be considered satisfactory.

SIMCOE.

Dr. J. C. C. Grasett, M.O.H.

I beg to present the following report for the past year:

We have been fortunate in having very few communicable diseases this year. There were three cases of measles reported, one case of scarlet fever and seven cases of typhoid. Several suspicious cases resembling diphtheria proved upon analysis to be free from the diphtheritic germs. A few cases of whooping cough came under observation, but none were regularly reported. Five cases of a severe form of chicken-pox were reported in January and February, which in some respects resembled mild smallpox, but as chicken-pox was prevalent at the time the diagnosis was maintained as chicken-pox. These cases were kept under quarantine and no further trouble was experienced.

The mortality rate might be considered high for the population, 57 deaths being reported from various causes as follows:

Accident	1	Cerebral softening	1
Cholera infantum	1	Chronic nephritis	1
Heart failure	5	Asthma	2
Cerebral hemorrhage	1	Chronic gastritis	1
Tuberculosis	4	Convulsions	1
Pneumonia	7	Exhaustion	1
LaGrippe	2	Anemia	1
Sciatica	1	Dysentery	1
Inanition	1	Typhoid	1
Senility	9	Uremia	1
Intestinal obstruction	1	Goitre	1
Cancer	3	Still-born	3
Abdominal abscess	1		

The birth rate succeeded in evening up the wastage by death, exactly 57 births being reported, which equals the number of deaths, the males preponderating at 33 to 24 females.

Samples of water and milk were collected for analysis at various times. Some cases of typhoid fever were traced to impure well water, but one case occurred where the town water was used, and the source of the infection in this case must have come from other cause than the water, as the town water (tap) as usual continues to show a good condition of purity in the analysis.

The milk supply was found to be well up in the percentage of butter fat and free from preservatives. Some samples were none too good in bacterial count, which would appear to be not always the fault of the dairyman, as those using artificial cooling and clarifying apparatus were not always the best in bacterial count, although milk treated in this way should always be purer, especially in the summer months.

The usual spring notices were distributed about the town, along with literature from the Provincial Board for the education of the public along sanitary matters.

Inspection of the dairies and sources of the town milk supply were made and analysis made of the water supply of the dairies. The premises in most cases were in good and cleanly condition, cement floors, good drainage, good water supply, and the manure collection well cared for in most cases. In a few cases the stables were not clean and drainage was faulty. The three slaughter-houses were inspected, and none were up to the regulations for slaughter-houses as provided by the Health Act. One had a good cement floor and was clean, with sides whitewashed and good drainage facilities; window screens were old. The other two had wooden floors, no screens to doors or windows, but good water supply. All three had hogs kept in yard or pens immediately adjoining the slaughtering room. The regulations require that the doors and windows be properly screened and that hogs should not be kept within 150 feet of the slaughter-house.

Inspections were made and permits given for one year to five persons for storing rags, metals and bones as follows: Wm. Jaques & Son, M. Finkle, Paul Wilson, Max Rhum, A. & L. Levine. Permission was also given Mr. A. C. Lea to store waste paper, packing, etc., in the Curling Rink.

The Provincial Board have, as usual, supplied free of charge a constant supply of vaccine, diphtheria antitoxin, anti-typhoid serum and anti-meningitis serum.

I beg to recommend:

1. Establish an area to include all streets provided with sewer accommodation within which area outside closets will be prohibited, and in this connection adopt and carry out the following section of the Public Health Act, sec. 25, sub-sec 2:

"Where a local Board in any town or city recommends that sanitary conveniences shall be installed in any building, and is of the opinion that the owner of the premises

is unable to pay the expense of the same at once, the municipality may install suitable sanitary conveniences at the expense of the owner, and the Board may direct that the cost, including interest at 5 per cent., be paid by the owner in equal annual instalments extending over five years."

This area might be made to include the so-called "fire limits," and thus do away with offensive closets in the more thickly populated parts of the town.

2. I would also recommend the adoption of the "Milk By-law," which would give the town a better control of the source of the milk supply and a more efficient handling of the same, as at present we are able to recommend only to milk dealers the proper handling of the milk supply.

STAYNER.

DR. R. R. SMALE, M.O.H.

The local Board of Health of this town have held four meetings during the year 1917.

It is pleasing to note how singularly free the town has been during that year from preventable disease. Only five cases of measles, of light nature, and two of scarlet fever have been reported to me during the year 1917. None of the above was followed with fatal result.

I beg to enclose herewith the annual report of Dr. Smale, M.O.H. for Stayner.

Report of the M.O.H.

The following is the annual report on the public health of the town of Stayner, Ont.

Infectious Disease.

Measles, five cases; all recovered. Scarlet fever, two cases; all recovered.

Water Supply.

The water supply has been uniformly good. No complaints have been received, nor has there been a single trace of disease traceable nearly or remotely during the past year to defective water supply or polluted water.

No case of typhoid.

Town Property.

The lock-up, long a thorn in the flesh of the town, due to its unsanitary position in having no means of disposal of sewage, nor any ground outside of the walls to dig cesspool, nor any water supply, has long been under the condemnation of the Board of health. The Council has been induced to take action. The lock-up is up for sale, and an iron cage purchased for the Town Hall, where sanitation will be efficiently looked after.

Private Property.

The cleaning up and keeping clean of premises was well attended to and early. Those few who were dilatory were notified. Also, late in the season, some having defective drains flooding neighbours' cellars were forced to rectify the same.

SUDBURY.

DR. W. J. COOK, M.O.H.; JAMES TAYLOR, SANITARY INSPECTOR.

We have the honour to submit this report upon the sanitary work for the twelve months ending the 30th November, 1917.

Garbage Collection.

The garbage collection has been regularly and efficiently done by the contractor; complaints few and always had prompt attention, considering the labour question in general. It is most gratifying to have this and the scavenger work done without any interruption.

The incinerator continues to give full satisfaction; has only required some repairs to the fire-box and the addition of electric lighting and the installation of a blower. This, when complete, ought to make the incinerator fully efficient.

Garbage, etc., destroyed, total loads, 2,948.

39 dogs, 8 horses. 1 calf, 1 cow, 6 hogs.

2½ barrels of fish, 3 barrels of pork, 2,000 lbs of meat, etc.

2 quarters of beef, 2 cases of eggs, 500 lbs. of turnips.

Collections.

Collections have been well maintained; the sum of $2,057.40 has been collected, leaving an outstanding balance of $63.70 closet account, and $166.50 for cesspools, the work having cost the sum of $1,961.65.

Plumbing and Drainage.

Ninety permits have been issued for work under this by-law, and all have been inspected and approved. There remain three occupied and two vacant houses not connected to the service where sewers exist, which we hope will be connected early in the spring.

Water Samples.

One hundred and forty-two tests were taken and sent to the Provincial Laboratory—22 from Lake Ramsay, 8 from dairies, and 112 from the town taps. Of those, 8 showed contamination in 25 c.c., 4 in 50 c.c., and 2 in 5 c.c. The month of August was the worst report, and immediately the trouble was located, the Medical Officer of Health took the necessary precautions to avoid a repetition.

Dairies.

Dairies have all been regularly inspected and a decided improvement has been made at all the large dairies, especially in the milk-house and handling. One hundred and thirty-five samples of milk have been taken and tested, and eight samples of cream. Only three were below butter fat, being two at 2.8 per cent. and one at 2.6 per cent. The highest was 5.4 per cent. and the average was 3.85 per cent.

Cream tests were all above the standard, the lowest being 17.50 per cent., and the highest was 26 per cent.

Bake-Shops.

In May the Council made the appointment of Bread and Bake-Shop Inspector.

There is now a great improvement in the bake-shops for the requirements of the assistants, the handling of bread, and also the standard weight is being produced. There has been taken and handed to the hospital 373 loaves, and the children's shelter received 65 loaves. Total loaves, 438.

Infectious Disease and Quarantine.

Unfortunately, in June a case of smallpox came into the town, and from this twelve more developed. The Vaccination Act was immediately enforced for all the children of school age, and every assistance was given by the school principals to have this regulation complied with and thus avoiding what at one time had every indication of an epidemic. There were under quarantine 13 cases of smallpox, 17 diphtheria, and 3 scarlet fever. Total persons under quarantine, 25 adults and 70 children. Every precaution was taken in releasing and disinfecting the houses.

Notices.

Two hundred and forty-seven written notices have been served after the usual verbal notice has not been complied with, and it is very gratifying to note the improvement and ready response by the residents to any requirements of the Health Act and the by-laws that we may be called upon to enforce.

Prosecution.

Again we must report a few prosecutions and hope by another year that this item will almost disappear. There have been 29 cases taken before the Police Magistrate, and a conviction recorded in all. One case was reversed upon an appeal; 15 cases for

unsanitary premises; 9 were allowed suspended sentence; 4 fined $5.00 and costs, and 2 fined $10.00 and costs. Milk, 2 cases—$10.00 and $5.00, together with costs. Meat, 3 cases—2 fined $5.00 and 1 $2.00 and costs. For not observing quarantine, 3 cases, 2 being allowed on suspended sentence upon payment of costs, and 1 imprisoned for one month. Total fines, $142.00.

Inspection.

Regular inspections have been made of all hotels, restaurants, lodging-houses and blocks, fruit stores, abattoirs and general business premises. There is a marked improvement in all, especially in the supply and handling of all food.

We take this opportunity of thanking the members of the Board of Health and the Town Council for their advice and ready support; also the public generally for the courtesy and help given in the execution of the duties required.

THOROLD.

Dr. Neil Campbell, M.O.H.

During the past year we have been singularly free from disease which was controllable by our efforts. Of contagious diseases we have had:

	Cases.	Deaths.
Typhoid	2	0
Diphtheria	6	0
Scarlet fever	1	0
Smallpox	0	0
Measles	9	1
Whooping cough	21	1

We had six meetings during the year, all well attended, and this was chiefly due to the efforts of our energetic Chairman, whom I hope to see in his present position for many years to come.

The collection of garbage has been reasonably efficient, and the disposal was improved very much last summer by a fire being kept burning in it during all the time that weather permitted.

During the latter part of last winter our regular water supply failed owing to the water in the canal falling lower than the bottom of our intake pipe. It became necessary to pump water directly from the canal at the pumping station, a very impure and dangerous source. By strong chlorinating and advising the people to boil the water we succeeded in avoiding any ill effects, but we might not again be so fortunate, and as we are to-day confronted by the same conditions I would strongly advise the deepening of the intake as soon as weather permits, as it must be done while navigation is closed.

Stable owners have not been prompt to obey the order concerning manure piles, and I would suggest that the Inspector make it plain to all such that this by-law must be complied with, as we have now given ample time so that it will not impose a hardship on anyone.

Two dogs suffering from rabies were discovered in town during the year, and two children were bitten by one of them. These children were given the Pasteur treatment by the Ontario Board of Health.

WESTON.

Dr. J. A. Meldrum, M.O.H.

During the year there have been reported 2 cases of tuberculosis, 3 of diphtheria, 83 of measles, and 2 of typhoid fever. Of the cases of typhoid fever the probability is that both were imported. One of them undoubtedly was, as he was taken ill the very day of his arrival in town. The other case was a foreigner residing in Shoddy Row. The epidemic of measles occurred in spring and early summer; every case was placarded, as well as those of the other diseases in which placarding is required. However, to prevent the spread of measles, it will be necessary, should we have another epidemic

of the kind, to have a special constable appointed to see that the children of quarantined houses obey the law and are not allowed to run on the streets. It is impossible for our regular Sanitary Officer, who is the town Chief of Police, to look after them and attend to his other duties as well.

Since November 1st, 1916, there have been 51 births, 14 marriages and 42 deaths. The causes of death were as follows:Heart disease, 5; old age, 3; apoplexy, 2; typhoid fever, 1; meningitis, 1; bronchitis, 2; cerebral abscess, 1; tuberculosis, 6; pneumonia, 6; premature birth, 3; still-born, 2; perforation of stomach, 1; chronic entero-colitis, 1; pericarditis, 1; killed by fall, 1; pernicious anaemia, 1; cholera infantum, 2; malnutrition, 1; hydrocephalus, 1. There has been some neglect in reporting the cases of tuberculosis, as there have been six deaths and only two cases reported. This should not be, as it is very important that tuberculosis should be reported. However, two of the cases that were not reported were from the King Edward Sanitarium, or were patients there. As usual, everything has gone well with the collection of garbage; the garbage man, who is very efficient, calls at every residence once each week, and all cans of garbage left out are emptied. There are still some citizens who have not complied with our request to furnish themselves with properly covered metal receptacles for their garbage. Quite a number of our streets were oiled at intervals this summer. This is going the right way, and, no doubt, as the streets are improved and gravelled the oiling will be further attended to; it is a very important matter in connection with the health of the people. During the summer there were complaints that the milk supplied by the dealers was not all that it should be. There are four milk dealers at present which supply milk to the citizens of the town; one of them furnishes pasteurized milk. While believing that pasteurized milk is safer, in a general way, than unpasteurized milk, we do not as yet insist on having the milk pasteurized, but be do insist that the milk be clean and of full strength. We have now at our disposal instruments recently procured for testing milk in every way, both as regards freedom from dirt and freedom from water, and also whether or not it contains a sufficient quantity of cream. The milk dealers claim to be perfectly willing to have their milk tested at any time and to place every facility at our disposal to have it done. The dairies or farms from which our dealers obtain their milk shall be inspected from time to time to see that everything is kept clean and that the cows are healthy. The model milk by-law issued and recommended by the Provincial Board of Health was adopted at a recent meeting by our Town Council, and it is now a by-law of the town. We are having a sufficient number of copies of it printed, so that one may be given to each person interested, dealers, dairymen and farmers. A sample of the town water has been sent to the Provincial Analyst's Office for examination once or twice to three or four times each month throughout the year. For eight months, up to the end of June, there was no trace of anything injurious found in it. During July, colon bacilli were found in considerable numbers, although not sufficient to make it necessary to ask householders to boil the water. During the last three months there has been a great improvement over July, but even yet it is not as good as it was during the first eight months of the Board of Health year. Although our Commissioners have been endeavouring to give us perfect drinking water the year round, they have quite a good deal to do yet before that goal is attained.

WINGHAM.

Dr. R. L. Stewart, M.O.H.

I have the honour to submit to you the following report for the year 1917.

The Municipal Board of Health have held their regular meetings as required by the Provincial Board of Health. The year has perhaps been one of more than usual anxiety for the Board in general, and for the Medical Officer of Health in particular, on account of the prevalence of the two contagious diseases, diphtheria and scarlet fever.

Up until November 5th, when the last case of diphtheria was placed under quarantine, the town, I may say, for the past eighteen months has never been without a case, and at times there were several.

The first case of scarlet fever developed in the late spring, and since that time we have never been absolutely free from a case under quarantine. From this disease at one time there were at least a dozen homes placarded. In spite of the fact that the local Board had cards printed setting forth the regulations of the Provincial Board relative to the observance of quarantine, I believe some paid little heed thereto, and this helped to counteract the efforts to stamp out this disease, which is perhaps, of all

contagious diseases, the most tenacious. Feeling that public schools are the hot-beds for the spread of contagious diseases, and knowing positively that the cases almost at once became more numerous on the reopening of school after vacation, we had it closed for eighteen days, during which time there was an evident decrease in the number of cases occurring. In the meantime, by request, we had an official visit from Dr. McNally, District Health Officer, and an emergency meeting of the joint High School, Public School and Health Boards, where the situation was discussed and the best means of controlling such positions suggested. The class-rooms, hall and basement of the public school were thoroughly fumigated with formaldehyde before being re-opened. No child is being allowed to return to school from an infected home until the expiration of three weeks in the case of diphtheria and six weeks in the case of scarlet fever. After the occurrence of the last case and thorough fumigation, a large percentage of the cases have been mild, and no deaths have occurred directly from either disease.

The Sanitary Inspector and I made a visit of inspection to the junk yard on May 23rd.

The slaughter-houses were also inspected and found to be in a good sanitary condition.

On the occurrence of a case or two that were suspicious of typhoid fever, the Sanitary Inspector and I made an investigation of the premises surrounding the wells from which water was being drunk. Samples of water from each of these wells, and at the same time samples of the town water from two taps in different parts of the town, were sent to the Provincial Laboratory for bacteriological examination. No typhoid bacilli were found in any of the samples; one sample of well water was considered unfit for drinking purposes, the other three samples practically free from contamination.

One request for license for the deposition of junk within the town limits was not granted by the local Board.

Fiftieth Annual Report

OF THE

INSPECTORS OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals for the Insane

OF THE

PROVINCE OF ONTARIO

Being for the Year ending 31st October

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
WILLIAM BRIGGS,
Cor. Queen & John Sts.
Toronto.

PARLIAMENT BUILDINGS,

TORONTO, March 14th, 1918.

To His Honour JOHN STRATHEARN HENDRIE, C.V.O.,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fiftieth Annual Report upon the Hospitals for the Insane of Ontario, being for the official year ending on the 31st October, 1917.

I have the honour to be,

Your Honour's most obedient servant,

WM. DAVID McPHERSON,
Provincial Secretary.

Office of the

Inspector of Prisons and Public Charities, Ontario.

Parliament Buildings,

Toronto, March 14th, 1917.

Sir,—We have the honour to transmit herewith, to be presented to His Honour the Lieutenant-Governor, the Fiftieth Annual Report upon the Hospitals for the Insane of Ontario, being for the official year ending 31st October, 1917.

I have the honour to be, Sir,

Your obedient servant,

W. W. DUNLOP,

Inspector

The Honourable William David McPherson, Esq., K.C., M.P.P.,

Provincial Secretary of the Province of Ontario, Toronto.

CONTENTS.

INTRODUCTORY REMARKS OF W. W. DUNLOP v

LIST OF HOSPITAL TABLES:—

Table No. 1, showing movements of entire Hospital population xii

Table No. 2, showing social state and religion of patients admitted during the year and of the total admissions xiv

Table No. 3, showing nativity of patients admitted during the year and since opening of Hospital xv

Table No. 4, showing the occupation of those admitted during the year, and since the opening of the Hospital xvi

Table No. 5, showing the counties and districts from which patients have been admitted during the twelve months ending October 31st, 1917, and the Hospitals they were assigned to xvii

Table No. 5*a*, showing counties and districts from which the entire number of patients admitted to the Hospitals have been received, including the admissions of the present year, also the counties and districts from which the patients remaining in residence the 31st October, 1917, were originally admitted xviii

Table No. 6, showing the assigned causes of insanity in cases admitted during the year xix

Table No. 7, showing hereditary tendency to insanity in patients admitted during the year xx

Table No. 8, showing summary of probational discharges during the year .. xx

Table No. 9, showing the causes of death of patients who died during the year ending October 31st, 1917 xxi

Table No. 10, showing form of mental diseases of patients admitted, discharged and died during the year xxiii

Table No. 11, showing—

(*a*) The length of time the patients received into the Hospitals during the year had been insane prior to their admission.

(*b*) The length of residence of patients remaining in Hospital on the 31st October, 1917.

(*c*) The periods that patients were under treatment who were discharged recovered during the year.

(*d*) The periods that patients were under treatment who were discharged improved during the year.

(*e*) The periods that patients were under treatment who were discharged unimproved during the year.

(*f*) The length of Hospital residence of the patients who died during the year xxv

Table No. 12, showing the general movements and results of treatment of patients in the Hospitals for the Insane, etc., of the Province, during each of the thirty-six years from January 1st, 1882, to the 31st October, 1917 xxvi

Table No. 13, showing the percentage of recoveries on average population, and admissions for the year ending October 31st, 1917..... xxvii

Table No. 14, showing summary of discharges during the year xxvii

Table No. 15, Deaths in Hospitals xxvii

Table No. 16, showing number of beds in each Hospital, number in residences, number of vacancies, over-population, and applications on fyle at close of official year xxix

Table No. 17, showing the number of officers and employees in each and all of the Hospitals, classified according to the duties performed xxx

Table No. 18, Comparative statement of revenue from paying patients and farm, and miscellaneous revenue xxxi

Table No. 19, Comparative statement of revenue received from the Hospitals, together with the number of paying patients in the Hospitals from year to year xxxii

Table No. 20, Comparative statement of expenditure on maintenance under estimate headings xxxiii

Table No. 21, Comparative statement of expenditure per capita cost per day xxxiv

Table No. 22, Comparisons, Appropriation, Expenditure, Consumption, Population and Revenue for the 12 months ending 31st October, 1917 xxxviii

Notes on per capita statement xl

APPENDIX.

REPORT OF J. C. MITCHELL, MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, BROCKVILLE 3
Statistical tables 6
REPORT OF DR. W. M. ENGLISH, MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR INSANE, HAMILTON 17
Statistical tables 19
REPORT OF DR. W. K. ROSS, ACTING MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, KINGSTON 30
Statistical tables 31
REPORT OF DR. W. J. ROBINSON, SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, LONDON 41
Statistical tables 45
REPORT OF DR. N. H. BEEMER, MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, MIMICO 56
Statistical tables 61
REPORT OF DR. W. T. WILSON, MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, PENETANGUISHENE 72
Statistical tables 74
REPORT OF DR. J. M. FORSTER, MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, TORONTO 85
Statistical tables 87
REPORT OF HOMEWOOD SANITARIUM, GUELPH—
Voluntary Branch 99
Insane Branch 100

REPORT

Of W. W. Dunlop, Inspector of Prisons and Public Charities, for the year ending October 31st, 1917.

General.

On the 31st October, 1917, exclusive of patients in the Homewood Sanatorium at Guelph, there were in the Hospital for the Insane of Ontario 6,153 insane persons divided as follows:—

Males	3,062
Females	3,091
	6,153

Movements of Patients.

The daily average number of patients in the Provincial Hospitals for the Insane, during the year, was 6,032.

The total number of admissions was 1,644, an increase of 203 over t' year 1916.

The total number of discharges was 771, an increase of 92.

The total number of deaths was 514, an increase of 24.

Revenue.

	1916.	1917.
From paying patients	$223,196 10	$237,394 28
Farm and miscellaneous	15,582 46	38,998 88
	$238,778 56	$276,393 16

An increase of $37,614.60.

Collection from the municipalities under the provisions of 6 Edward VII, Chap. 8, as follows:—

1916.	1917.
$127,563.70	$127,658.40

Deportations.

During the year ending October 31st, 1917, 67 persons have been deported.

Number of Insane	6
Number of Criminals	60
Number likely to become a public charge	1
	67

Mimico—Most of the buildings have been re-wired, which greatly reduces the fire hazard and is also much more convenient.

The increased production from the farm and garden was very satisfactory.

A steam boiler was installed in the piggery, and has proved of great service.

General improvements have been made on all buildings.

Penetanguishene—Improvements have been made to the buildings and grounds.

Toronto—Many necessary improvements have been made to the buildings during the past year, including a renewal of the heating and plumbing plant.

Brockville—General improvements have been made on all the buildings. The kitchen, pantries, electrical room, have all been tiled with tile from our plant at Mimico.

Hamilton—Work has been commenced on the central boiler house. This, when completed, will be one of the best arranged and equipped in the Province.

Improvements have been made in the east house, making it suitable for insane criminals.

Kingston—Improvements have been made in the main building, greatly improving the light and ventilation of the wards. Other general improvements have been made in the industrial building, and coal vaults.

London—The main building which was partly damaged by fire, has been overhauled and greatly improved, and other general improvements made.

Reception Hospital.

Movements of Patients.

In residence October 31st, 1916	37
Admitted during the year	609
	646
Transferred to Toronto Hospital	274
Discharged	317
Died	12
In residence October 31st, 1917	43
	646

W. W. Dunlop,
Inspector.

TABLE

Showing movements of patients in the Hospital

	Brockville Hospital.			Hamilton Hospital.			Kingston Hospital.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital.....	386	378	764	656	639	1,295	311	268	579
In Residence, Oct. 31st, 1916..	375	398	773	682	638	1,320	304	262	566
Admitted during year 1917:—									
By Warrant	3	3	6	102	44	146	17	4	21
By Medical Certificate...	98	106	204	75	95	170	76	59	135
Voluntary.....	.....	.....	.....	4	.....	4	.....	.....	.....
Total number under treatment during year.....	476	507	983	863	777	1,640	397	325	722
Discharges during year:—									
As recovered.....	18	24	42	24	24	48	45	30	75
As improved.....	29	20	49	44	47	91	8	8	16
As unimproved.....	2	4	6	3	3	6	3	.....	3
As not insane.....	.....	.....	.....	1	.....	1	1	.....	1
Total number discharged during year	49	48	97	72	74	146	57	38	95
Died	39	35	74	63	48	111	19	22	41
Deported	.....	1	1	3	.....	3	.....	.....	.....
Eloped	10	.....	10	4	1	5	4	.....	4
Transferred	.....	.....	.....	.....	3	3	.....	2	2
Total number admitted since opening of Hospital....	1,744	1,719	3,463	3,704	3,530	7,234	2,980	2,516	5,496
Total number discharged since opening of Hospital....	661	731	1,392	1,400	1,557	2,957	1,383	1,209	2,592
Tota number died since opening of Hospital.....	592	479	1,071	1,194	1,054	2,248	928	736	1,664
Total number deported since opening of Hospital....	13	9	22	53	8	61	10	4	14
Total number eloped since opening of Hospital....	73	2	75	125	10	135	97	1	98
Total number transferr'd since opening of Hospital....	27	75	102	211	250	461	245	303	548
Total remaining in Hospital, Oct. 31st, 1917.....	378	423	801	721	651	1,372	317	263	580
Number of applications on fyle	10	8	18	17	9	26	3	2	5
Daily average population	386	425	811	689	641	1,330	311	259	570
Collective days' stay of all patients in residence during year.	11,864	13,253	25,117	250,974	233,841	484,815	113,548	94,715	208,263

No. 1.

for the year ending October 31st, 1917.

London Hospital.			Mimico Hospital.			Penetang Hospital.			Toronto Hospital.			Totals.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total
511	555	1,066	340	320	660	166	203	369	426	426	852	2,796	2,789	5,585
564	607	1,171	339	339	678	165	198	363	440	580	1,020	2,869	3,022	5,891
28	11	39	60	30	90	11	9	20	87	10	97	308	111	419
89	112	201	43	38	81	3	8	11	222	197	412	606	615	1,221
.....	.....	.....	.....	.....	.....	....	....	....	.....	.....	.....	4	.....	4
681	730	1,411	442	407	849	179	215	394	749	787	1,536	3,787	3,748	7,535
39	34	73	31	24	55	....	....	....	49	60	109	206	196	402
19	31	50	18	13	31	....	....	....	44	54	98	162	173	335
.....	3	3	2	2	4	....	....	....	2	6	8	12	18	30
.....	.....	.....	.....	.....	.....	....	....	....	.....	2	2	2	2	
58	68	126	51	39	90	....	....	....	95	122	217	382	389	771
38	51	89	28	19	47	9	11	20	91	41	132	287	227	514
.....	.....	.....	.....	.....	.....	....	....	....	.....	1	1	3	2	
2	.....	2	1	.....	1	3	....	3	7	3	10	31	4	35
1	.....	1	16	14	30	....	2	2	5	14	19	22	35	57
4,118	3,805	7,923	1,965	1,773	3,738	319	379	698	6,900	6,537	13,437	21,738	20,587	41,989
1,777	1,744	3,521	672	600	1,272	17	22	39	3,346	3,519	6,865	9,253	9,378	18,631
1,355	1,186	2,541	570	481	1,051	101	129	230	1,895	1,500	3,395	6,635	5,683	12,318
15	4	19	46	9	55	9	....	9	113	48	161	301	35	336
142	16	158	49	1	50	13	....	13	164	29	193	663	59	722
247	244	491	282	347	629	12	26	38	831	835	1,666	1,693	1,709	3,402
582	611	1,193	346	335	681	167	202	369	551	606	1,157	3,062	3,091	6,153
6	12	18	31	18	49	....	....	....	6	4	10	73	53	126
554	616	1,170	345	338	683	164	201	365	544	559	1,103	2,993	3,039	6,032
202,274	224,725	426,999	126,058	123,366	249,424	59,771	73,506	133,277	198,560	204,035	402,595	963,045	967,441	1,930,486

TABLE No. 2.

Showing social state and religion of patients admitted during the year and since the opening of the Hospital.

——	Admissions of Year.	In residence.	Admissions since opening.
SOCIAL STATE.			
Single	813	3,578	20,440
Married	699	2,216	20,613
Widowed	125	324	846
Divorced	3	4	14
Separated	2	5	22
Unascertained	2	26	54
Total	1,644	6,153	41,989
RELIGION.			
Baptists	71	289	1,788
Congregationalists	5	44	308
Church of England	353	1,212	9,112
Methodists	337	1,306	9,239
Presbyterians	265	1,053	8,120
Roman Catholics	376	1,409	8,937
Other Denominations	159	584	3,038
Unascertained	78	256	1,447
Totals	1,644	6,153	41,989

TABLE No. 3.

Showing nativity of patients admitted during the year and since the opening of the Hospital.

Nativity.	Admissions of Year.	Admissions since opening.
Totals born in Canada	1,078	25,327
Armenia	1	4
Assyria	.....	15
Austria	30	106
Australia	.....	4
Belgium	2	2
Bulgaria	3	12
China	2	11
Denmark	.....	9
England	239	5,473
France	2	37
Finland	10	69
Galicia	2	9
Germany	11	261
Greece	2	28
Holland	5	11
Hungary	3	13
Ireland	53	5,242
Italy	11	99
Japan	.....	1
Macedonia	1	11
Other British Possessions	3	227
Norway	.....	16
Roumania	3	15
Russia	50	247
Scotland	60	2,578
South America	.....	10
Switzerland	1	5
Sweden	2	51
Turkey	3	18
United States	43	1,103
West Indies	1	27
Unascertained and other countries	23	948
Totals	1,644	41,989

TABLE No. 4.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetanguishene Hospital.	Toronto Hospital.	Admitted this year.	Since opening.
Professional :— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	4	2	19	5	3	....	4	37	706
Commercial :— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	19	25	9	16	6	....	35	110	2,168
Agricultural and Pastoral :— Farmers, Gardeners, Stock Men, etc	33	27	37	39	24	1	19	180	6,257
Mechanics at Outdoor Vocations :— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	11	10	7	9	15	....	42	94	2,081
Mechanics, etc., at Sedentary Vocations :— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	9	37	4	17	8	....	38	113	2,652
Domestic Service :— Waiters, Cooks, Servants, etc	13	23	1	11	5	6	38	97	3,937
Education and Higher Domestic Duties :— Governesses, Teachers, Students, Housekeepers, Nurses etc	90	108	48	78	52	9	99	484	12,458
Miners, Marine Engineers, Railway Employees, Seamen, Soldiers, etc	3	7	1	20	8	2	29	70	472
Laborers	26	54	16	18	36	10	110	270	6,020
No Occupation	2	6	14	27	13	3	63	128	2,659
Unascertained	....	21	....	....	1	....	39	61	2,579
Totals	210	320	156	240	171	31	516	1,644	41,989

TABLE No. 5.

Showing the Counties and Districts from which patients have been admitted during the year ending October 31st, 1917, and the Hospitals they were assigned to.

Counties and Districts.	Number received under warrant process.	Number received from private houses by medical certificates.	Total number received from respective counties during the year.	Assigned to Brockville Hospital.	Assigned to Hamilton Hospital.	Assigned to Kingston Hospital.	Assigned to London Hospital.	Assigned to Mimico Hospital.	Assigned to Penetang Hospital.	Assigned to Toronto Hospital.
Algoma District	22	6	28	.....	3	....	1	19	5	....
Brant	4	14	18	.....	18	....	....	....	.....	....
Bruce	6	14	20	.....	1	....	17	1	1	....
Carleton	1	68	69	67	....	1	....	....	.....	1
Dufferin	2	2	4	.....	4	....	....	....	.....	....
Dundas	.....	8	8	8	....	....	....	....	.....	....
Durham	3	11	14	2	....	7	....	1	.....	4
Elgin	2	17	19	.....	....	....	19	....	.....	....
Essex	4	24	28	.....	....	.....	28	....	.....	....
Frontenac	1	37	38	.....	....	36	....	1	.....	1
Glengarry	1	14	15	13	....	1	....	....	.....	1
Grenville	1	9	10	10	....	....	....	....	.....	....
Grey	6	14	20	.....	16	....	2	1	.....	1
Haldimand	2	5	7	.....	7	....	....	....	.....	....
Halton	.....	6	6	.....	6	....	....	....	.....	....
Hastings	1	20	21	.....	1	20	....	....	.....	....
Huron	6	10	16	.....	....	....	16	....	.....	....
Kent	5	14	19	.....	....	....	19	....	.....	....
Kenora	.....	.....	.....	.....	....	....	....	....	.....	....
Lambton	2	24	26	.....	....	....	26	....	.....	....
Lanark	1	12	13	12	1	....	....	....	.....	....
Leeds	.....	50	50	50	....	....	....	....	.....	....
Lennox and Addington	3	16	19	1	....	18	....	....	.....	....
Lincoln	1	11	12	.....	12	...	....	....	.....	....
Manitoulin	2	.....	2	.....	....	....	....	2	.....	....
Middlesex	1	73	74	.....	....	....	74	....	.....	....
Muskoka District	2	3	5	.....	....	....	1	4	.....	....
Nipissing District	33	9	42	2	....	1	....	31	8	....
Norfolk	4	9	13	.....	12	....	....	....	.....	1
Northumberland	3	15	18	.....	....	13	....	....	.....	5
Ontario	2	11	13	.....	....	1	....	9	2	1
Oxford	7	10	17	.....	2	....	15	....	.....	....
Parry Sound District	2	5	7	.....	....	....	....	6	1	....
Peel	2	8	10	.....	....	....	....	8	.....	2
Perth	4	15	19	.....	....	....	19	....	.....	....
Peterborough	5	15	20	.....	....	7	....	11	.....	2
Prescott	2	8	10	10	....	....	....	....	.....	....
Prince Edward	3	3	6	.....	....	5	....	1	.....	....
Rainy River District	3	2	5	.....	....	....	....	5	.....	....
Renfrew	.....	24	24	7	....	17	....	....	.....	....
Russell	1	5	6	6	....	....	....	....	.....	....
Simcoe	8	19	37	1	1	....	....	29	3	3
Sudbury	.....	.....	.....	.....	....	....	....	....	.....	....
Stormont	.....	20	20	19	....	....	....	....	.....	1
Temiskaming	3	.....	.....	.....	....	....	....	....	.....	....
Thunder Bay District	22	2	24	.....	2	....	1	18	3	....
Victoria and Haliburton	9	10	19	.....	1	5	....	12	.....	1
Waterloo	6	19	25	.....	23	1	....	....	.....	1
Welland	4	22	26	.....	25	....	....	....	.....	1
Wellington	37	24	61	.....	59	....	1	....	.....	1
Wentworth	70	46	116	.....	115	....	....	1	.....	....
York	100	416	516	1	7	....	1	10	8	489
Unascertained	21	.....	29	1	4	23	....	1	.....	....
Totals	411	1,233	1,644	210	320	156	240	171	31	516

TABLE No. 5a.

Showing the counties and districts from which the entire number of patients admitted to the Hospitals have been received, including the admissions of the present year; also the counties and districts from which the patients remaining in residence the 31st October, 1917, were originally admitted.

Counties and Districts.	Admissions of the year.	Total admissions.	Patients in residence 31st October, 1917.							
			Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Total.
Algoma District	28	289	....	15	....	2	39	22	5	83
Brant	18	636	....	100	....	6	2	2	1	111
Bruce	20	657	1	5	....	109	....	4	3	122
Carleton	69	1,558	263	2	34	.....	1	3	1	304
Dufferin	4	173	....	26	....	.....	2	3	2	33
Dundas	8	290	19	.....	2	.....	2	....	.....	23
Durham	14	542	3	1	11	1	9	....	11	36
Elgin	19	670	....	1	....	78	1	3	2	85
Essex	28	631	3	3	....	109	....	....	1	116
Frontenac	38	1,455	9	9	119	.....	1	3	1	142
Glengarry	15	375	36	.....	9	.....	....	....	1	46
Grenville	10	433	43	.....	2	.....	....	....	1	46
Grey	20	788	....	111	1	7	8	9	1	137
Haldimand	7	405	1	52	....	1	1	....	.....	55
Halton	6	431	1	40	....	1	3	....	2	47
Hastings	21	942	9	1	88	.....	1	2	2	103
Huron	16	952	2	1	....	110	....	2	6	122
Kent	19	689	2	2	....	97	1	....	.....	102
Kenora	.....	1	....	.....	.....	.....	.....	.....	.....	.....
Lambton	26	893	3	.....	1	116	....	1	.....	121
Lanark	13	716	72	.....	11	.....	....	1	.....	84
Leeds	50	747	105	1	8	.....	....	1	1	116
Lennox and Addington	19	502	3	.....	45	.....	....	3	2	53
Lincoln	12	590	1	54	....	.....	1	....	1	57
Manitoulin	2	29	....	.....	.....	.....	8	....	.....	8
Middlesex	74	2,291	2	4	1	280	2	2	1	292
Muskoka District	5	197	....	2	....	.....	15	12	2	31
Nipissing District	42	351	1	9	2	.....	72	15	1	100
Norfolk	13	419	....	56	1	.....	....	2	.....	59
Northumberland	18	797	3	2	72	.....	3	8	9	97
Ontario	13	874	1	7	3	4	49	21	15	100
Oxford	17	770	1	6	....	92	2	1	3	105
Parry Sound District	7	145	....	4	....	.....	30	4	4	42
Peel	10	522	1	8	....	.....	34	3	6	52
Perth	19	802	3	7	....	112	2	1	.....	25
Peterborough	20	594	1	1	9	.....	64	6	4	85
Prescott	10	333	60	2	3	.....	....	2	.....	67
Prince Edward	6	297	....	.....	33	.....	2	....	1	36
Rainy River District	5	90	....	2	.....	.....	14	6	.....	22
Renfrew	24	577	14	.....	73	.....	....	3	1	91
Russell	6	144	38	1	1	.....	....	....	.....	40
Simcoe	37	1,255	3	20	....	4	88	67	13	195
Sudbury	.....	5	....	3	....	.....	....	....	.....	3
Stormont	20	491	66	1	4	.....	....	1	1	73
Temiskaming	.....	11	1	7	....	.....	....	....	.....	8
Thunder Bay District	24	213	2	8	1	3	37	16	2	69
Victoria and Haliburton	19	731	....	3	8	.....	66	8	6	91
Waterloo	25	628	....	131	....	1	1	1	7	141
Welland	26	592	2	84	2	.....	2	1	2	93
Wellington	61	1,049	....	165	....	1	2	5	5	178
Wentworth	116	2,485	3	360	4	3	2	7	5	384
York	516	9,341	23	46	12	8	112	104	1,021	1,326
Unascertained	28	588	....	6	20	48	2	14	4	94
New Brunswick	.....	2	....	1	....	.....	....	....	.....	1
United States	.....	1	....	.....	.....	.....	....	....	.....	.....
Totals	1,644	41,989	801	1,372	580	1,193	681	369	1,157	6,153

TABLE No. 6.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	32	45	77	11	10	21	33
Mental Strain, Worry and Overwork (not included in above)	92	83	175	30	40	70	83
Religious Excitement	2	7	9	1	3	4	5
Love Affairs, including seduction	9	5	14	2	4	6	8
Fright and Nervous Shock	10	11	21	4	3	7	13
PHYSICAL.							
Alcoholism	34	2	36	3	3	6	9
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	29	2	31	1	.....	1	1
Masturbation	1	3	4	.....	.....	.....	4
Insolation	2	1	3	.....	.....	.....	3
Accident or Injury	8	2	10	4	.....	4	6
Pregnancy	.....	14	14	.....	6	6	7
Parturition and Puerperium	.....	14	14	.....	5	5	6
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	20	20	.....	8	8	10
Fevers	2	1	3	1	.....	1	2
Privation and Overwork	12	11	23	5	5	10	13
Epilepsy	27	16	43	5	5	10	20
Other Convulsive Diseases	.....	1	1	.....	.....	.....	1
Diseases of Brain and Skull	2	3	5	2	.....	2	2
Senility	49	66	115	10	10	20	28
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	14	5	19	1	1	2	10
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	1	.....	1	.....	.....	.....	.....
Other Auto-infection	2	3	5	1	1	2	.....
Other Bodily Diseases	23	17	40	3	8	11	24
HEREDITARY.							
Congenital Defect	54	34	88	15	22	37	20
Unascertained	512	358	870	479	336	815	288
Not Insane	1	2	3	.....	.....	.....	.....
Totals	918	726	1,644	578	470	1,048	596

TABLE No. 7.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted During Year.		
	Male.	Female.	Total.
Paternal Branch	54	55	109
Maternal Branch	49	79	128
Paternal and Maternal Branches	20	17	37
Collateral Branches	38	35	73
No hereditary tendency	231	202	433
Unascertained	526	338	864
Not insane	.....	.....	.....
Totals	918	726	1,644

TABLE No. 8.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	342	440	782
Discharged, Recovered while on Probation	109	142	251
" Improved " "	92	113	205
" Unimproved " "	3	4	7
Died " "	1	2	3
Returned to Hospital	80	96	176
Absent on Probation on October 31st, 1916	77	104	181

TABLE No. 9.

Showing the causes of death of patients who died during the year ending October 31st, 1917.

Cause of Death.	Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Total.
Specific Infectious Diseases:—								
Typhoid Fever	.....	.....	.....	.....	.....	.....	.....	.....
Influenza	.....	.....	.....	.....	.....	.....	.....	.....
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....	.....	.....
Erysipelas	1	.....	.....	1	.....	1	.....	3
Septicæmia	.....	2	.....	.....	.....	1	3	6
Dysentery	1	2	.....	.....	1	.....	.....	4
Syphilis	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis	16	13	13	9	7	6	9	73
Toxemia	.....	.....	.....	.....	.....	.....	.....	.....
Jaundice	.....	.....	.....	.....	.....	.....	.....	.....
Constitutional Diseases:—								
Rheumatism	.....	.....	.....	.....	.....	.....	.....	.....
Arthritis Deformas	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	1	.....	.....	.....	.....	.....	.....	1
Diseases of the Digestive System:—								
Mouth, salivary glands	.....	.....	.....	1	.....	.....	.....	1
Pharynx	.....	.....	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....	.....	.....
Œsophagus	1	.....	.....	.....	.....	.....	2	3
Enteritis	.....	.....	.....	.....	.....	.....	.....	.....
Stomach	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the Intestines:—								
Diseases of the Liver	1	2	1	.....	.....	1	2	7
Diseases of the Pancreas	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the Peritoneum	1	.....	1	.....	.....	.....	1	3
Intestinal obstruction	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the Respiratory System:—								
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....	.....	.....
" " Bronchi	.....	.....	.....	.....	1	1	.....	2
" " Lungs	3	4	6	12	2	1	.....	28
" " Pleura	.....	.....	.....	.....	.....	.....	5	5
Diseases of the Circulatory System:—								
Diseases of the Pericardium	2	.....	.....	1	.....	.....	.....	3
" " Heart	4	6	5	7	4	.....	7	33
Arterio-sclerosis	15	1	.....	1	.....	3	2	22
Aneurism	.....	1	.....	.....	.....	.....	.....	1
Diseases of the Blood and Ductless Glands:—								
Anæmia	.....	1	.....	.....	.....	.....	2	3
Pernicious Anæmia	.....	.....	.....	2	.....	.....	1	3
Leucæmia	.....	.....	.....	.....	.....	.....	1	1
Exophthalmic Goitre	.....	.....	.....	.....	.....	1	.....	1
Diseases of the Genito-Urinary System	2	2	.....	4	1	2	5	16
Carried forward	48	34	26	38	16	17	40	219

TABLE No. 9—*Continued.*

Showing the causes of death of patients who died during the year ending October 31st, 1917.

Cause of Death.	Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Total.
Brought forward	48	34	26	38	16	17	40	219
Diseases of the Nervous System:—								
Diseases of the Nerves	.....	.....	.....	.....	.....	.....	.....	.....
" " Spinal Cord	.....	.....	.....	.....	.....	.....	.....	.....
" " Meninges	.....	.....	.....	.....	.....	.....	.....	.....
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hemorrhage, and other gross lesions)	1	7	1	6	.....	.....	3	18
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	.....	4	.....	1	.....	.....	1	6
Epilepsy	2	17	5	3	3	.....	10	40
Mental Diseases:—								
Exhaustion of Acute Mental Disease	13	13	2	9	13	.....	4	54
Exhaustion of Chronic Mental Disease	.....	12	.....	3	11	.....	.....	26
General Paresis	6	3	.....	4	.....	1	41	55
Intoxications:—								
Alcoholism	.....	.....	.....	.....	.....	.....	.....	.....
Morphinism	.....	.....	.....	.....	.....	.....	.....	.....
Metallic Poisoning	.....	.....	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	.....	.....	.....	.....
Debility of Old Age	.....	21	5	20	3	2	30	81
Accident	.....	.....	.....	2	.....	.....	.....	2
Suicide	2	.....	.....	2	.....	.....	.....	4
Surgical Diseases	2	.....	1	1	.....	.....	1	5
Gynæcological Diseases	.....	.....	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer	.....	.....	1	.....	.....	.....	.....	1
Pellagra	.....	.....	.....	.....	.....	.....	1	1
Unknown (died on probation)	.....	.....	.....	.....	1	.....	.....	1
Totals	74	111	41	89	47	20	132	514

TABLE No. 10.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	.....	1	....	1	....	....	....
(b) Infection Delirium	1	....	1	....	2	2	....	....	....
(c) Post Infection Psychoses	1	6	7	1	3	4	1	2	3
Exhaustion Psychoses:—									
(a) Collapsed Delirium	1	7	8	1	6	7	1	5	6
(b) Acute Confusional Psychoses	5	25	30	6	13	19	....	11	11
(c) Neurasthenia	9	4	13	10	3	13	1	....	1
(d) Psychasthenia	....	....	.....	....	....	....	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	22	7	29	10	6	16	1	1	2
(b) Chronic "	....	....	.....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	20	3	23	18	2	20	2	....	2
(b) Delirium Tremens	2	....	2	1	....	1	....	....	....
(c) Korsakow's Psychoses	3	....	3	....	....	....	3	....	3
(d) Acute Alcoholic Hallucinosis	....	....	.....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	.....	1	....	1	....	....	....
(f) " Paranoia	....	....	.....	1	....	1	....	....	....
(g) " Paresis	....	....	.....	....	....	....	....	....	....
(h) Morphinism	10	2	12	7	3	10	....	....	....
(i) Cocainism	....	....	.....	....	....	....	....	....	....
(j) Pelagra	....	....	.....	....	....	....	1	....	1
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	.....	....	....	....	....	....	....
(b) Cretinism	....	....	.....	....	....	....	....	....	....
(c) Hyparthyroganous	....	....	.....	....	....	....	....	....	....
(d) Exophthalmic Goitre	....	....	.....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	107	62	169	26	27	53	18	15	33
(b) Catatonic	169	134	203	62	80	142	31	28	59
(c) Paranoid	109	56	165	38	33	71	8	6	14
General Paresis	52	6	58	10	2	12	60	5	65
Organic Dementias:— Traumatic	....	....	.....	....	....	....	....	....	....
(a) Cerebral Sclerosis	2	....	2	....	....	....	....	2	2
(b) Huntingdon's Chorea	4	3	7	....	1	1	....	1	1
(c) Multiple Sclerosis	1	....	1	....	....	....	....	....	....
(d) Cerebral Syphilis	3	1	4	1	....	1	1	....	1
(e) Tabetic Psychoses	3	....	3	....	....	....	....	....	....
(f) Arterio-sclerotic Psychoses	15	8	23	5	1	6	7	2	9
(g) Cerebral Tumor, Abscess, Hæmorrhage	1	....	1	....	....	....	1	1	2
(h) Tramatic Dementia	....	....	.....	....	....	....	....	1	1
Involution Psychoses:—									
(a) Melancholia	26	59	85	13	27	40	7	13	20
(b) Pre-senile Delusional Psychoses	8	6	14	....	....	....	1	1	2
(c) Senile Dementia	82	79	161	12	15	27	52	60	112
(d) Presbyphrenia	....	....	.....	....	....	....	....	....	....
Carried Forward	656	468	1,124	224	224	448	196	154	350

TABLE No. 10.—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	656	468	1,124	224	224	448	196	154	350
Manic Depressive Psychos:—									
(a) Manic States	69	91	160	53	64	117	35	23	58
(b) Depressed States	69	72	141	44	61	105	7	10	17
(c) Mixed States	15	9	24	13	12	25	4	3	7
Paranoia	3	8	11	5	3	8	1	1	2
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	36	19	55	16	6	22	21	24	45
(b) Hysterical Psychoses	....	7	7	....	5	5	....	....	....
(c) Traumatic Psychoses	3	....	3	....	....	....	....	....	....
(d) Post Apoleptic	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	45	35	80	18	12	30	12	6	18
(b) Idiocy	1	1	2	....	....	....	1	....	1
(c) Hypochondriac	....	....	....	....	....	....	....	....	....
Not Diagnosed	22	13	35	7	1	8	10	6	16
Not Insane	....	2	2	2	2	4	....	....	....
Totals	918	726	1,644	382	*390	772	287	227	514

* Includes 1 deported.

TABLE No. 11.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on October 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	217	186	13	21	9	80
From 1 to 2 months	123	117	27	15	3	23
" 2 " 3 "	95	120	22	11	2	20
" 3 " 4 "	57	92	42	16	3	21
" 4 " 5 "	57	84	47	15	2	12
" 5 " 6 "	127	66	47	29	2	15
" 6 " 9 "	95	151	72	67	.....	28
" 9 "12 "	89	167	42	34	1	22
" 12 "18 "	70	243	45	47	5	28
" 18 months to 2 years	61	246	8	10	.....	20
" 2 to 3 years	128	435	16	22	.....	36
" 3 " 4 "	76	403	6	16	.....	23
" 4 " 5 "	70	348	7	7	1	7
" 5 " 10 "	148	1,197	5	22	2	41
" 10 " 15 "	61	752	2	4	.....	33
" 15 " 20 "	28	592	.....	1	.....	14
" 20 years and upwards.	64	954	.....	.....	.....	91
Unknown	78	.....	.....	.....	.....	.....
Not insane	.....	.....	4	.....	.....	.....
Totals	1,644	6,153	*405	*336	30	514

* Includes deports

TABLE

Showing the general movement and result of treatment of patients in the Hospitals 1882, to the 31st

—	Average daily Population.			Number of patients admitted.			Number of patients recovered.			Patients discharged improved, unimproved and deported.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Av. for 5 years 1882-1886	**1,312**	**1,330**	**2,642**	**264**	**234**	**498**	**82**	**87**	**169**	**36**	**40**	**76**
Av. for 5 years 1887-1891	**1,586**	**1,532**	**3,118**	**314**	**306**	**620**	**88**	**85**	**173**	**38**	**46**	**84**
Av. for 5 years 1892-1896	**1,894**	**1,932**	**3,826**	**354**	**394**	**748**	**106**	**111**	**217**	**44**	**55**	**99**
1897	2,097	2,157	4,254	507	398	905	107	116	223	42	52	94
1898	2,153	2,215	4,368	349	411	759	122	129	251	54	59	113
1899	2,183	2,258	4,441	368	343	711	116	145	261	48	47	95
1900	2,197	2,288	4,485	352	370	722	121	133	254	28	44	72
1901	2,236	2,368	4,604	372	370	740	145	130	275	26	31	57
Av. for 5 years 1897-1901	**2,173**	**2,257**	**4,430**	**389**	**379**	**767**	**122**	**131**	**253**	**40**	**46**	**86**
1902	2,249	2,461	4,710	381	578	959	121	139	260	51	61	112
1903	2,283	2,490	4,773	404	416	820	146	176	322	41	60	101
1904	2,346	2,551	4,897	486	537	1,023	146	156	302	39	60	99
1905	2,396	2,616	5,012	511	538	1,049	149	166	315	64	57	121
1906	2,478	2,699	5,177	517	568	1,085	142	172	314	79	76	155
Av. for 5 years 1902-1906	**2,350**	**2,564**	**4,914**	**456**	**527**	**983**	**141**	**162**	**303**	**55**	**63**	**118**
1907	2,511	2,747	5,258	568	528	1,096	146	166	312	118	97	215
1908	2,586	2,814	5,400	577	547	1,124	115	109	224	147	99	246
*1909	2,629	2,871	5,500	438	405	843	152	125	277	100	97	197
1910	2,662	2,879	5,541	567	573	1,140	146	169	315	126	138	264
1911	2,708	2,884	5,592	560	580	1,140	135	164	299	138	142	280
Av. for 5 years 1907-1911	**2,619**	**2,839**	**5,448**	**542**	**527**	**1,069**	**139**	**147**	**286**	**126**	**114**	**240**
1912	2,748	2,934	5,682	653	594	1,247	141	155	296	171	148	319
1913	2,832	2,990	5,822	710	627	1,337	167	147	314	181	163	344
1914	2,877	3,042	5,919	684	667	1,351	203	163	366	220	198	418
1915	2,884	3,088	5,972	689	615	1,304	146	147	293	159	182	341
1916	2,936	2,993	5,929	738	676	1,414	184	165	349	158	168	326
Average 5 years 1912-1916	**2,856**	**3,009**	**5,865**	**695**	**636**	**1,331**	**168**	**156**	**324**	**178**	**172**	**390**
1917	2,993	3,039	6,032	618	726	1,644	206	196	402	174	181	355

* 10 months ending October 31st, 1909.

No. 12.

for the Insane of the Province during the thirty-six years from January 1st, October, 1917.

Number of patients who died.			Percentage of recoveries to average daily population.			Percentage of deaths to average daily population.			Number of patients remaining in Hospitals at end of each year.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
91	**63**	**154**	**6.25**	**6.54**	**6.39**	**6.94**	**4.74**	**5.83**	**1,329**	**1,446**	**2,775**
88	**83**	**171**	**5.56**	**5.88**	**5.55**	**5.56**	**5.42**	**5.48**	**1,600**	**1,601**	**3,201**
124	**93**	**217**	**5.59**	**5.75**	**5.67**	**6.55**	**4.82**	**5.69**	**1,910**	**1,955**	**3,865**
145	117	262	5.10	5.38	5.24	6.91	5.42	6.17	2,116	2,163	4,279
130	108	238	5.67	5.88	5.77	6.04	4.88	5.46	2,152	2,236	4,388
160	132	292	5.31	6.42	5.87	7.28	5.85	6.57	2,176	2,251	4,427
136	133	269	5.51	5.82	5.67	6.19	5.81	6.00	2,198	2,300	4,498
150	107	257	6.48	5.47	5.97	6.70	4.52	5.61	2,236	2,368	4,604
144	**120**	**264**	**5.61**	**5.79**	**5.70**	**6.22**	**5.29**	**5.96**	**2,175**	**2,264**	**4,439**
158	129	287	5.38	5.65	5.52	7.02	5.24	6.09	2,248	2,464	4,712
150	139	289	6.39	7.07	6.75	6.57	5.58	6.05	2,287	2,492	4,779
172	163	335	6.22	6.12	6.18	7.35	6.39	6.84	2,328	2,543	4,871
141	147	288	6.22	6.34	6.28	5.88	5.62	5.75	2,435	2,657	5,092
173	184	357	5.73	6.37	6.06	5.73	6.37	6.06	2,491	2,720	5,211
159	**152**	**311**	**5.99**	**6.31**	**6.15**	**6.51**	**5.84**	**6.18**	**2,358**	**2,575**	**4,933**
197	176	373	5.82	6.04	6.01	7.84	6.41	7.09	2,549	2,765	5,314
193	158	351	4.45	3.87	4.15	7.46	5.61	6.50	2,614	2,877	5,491
132	127	259	5.89	4.38	5.11	5.02	4.42	4.71	2,634	2,897	5,531
174	164	338	5.48	5.87	5.69	6.54	5.69	6.10	2,688	2,921	5,609
200	215	415	4.99	5.68	5.33	7.38	7.45	7.42	2,715	2,925	5,640
179	**168**	**347**	**5.30**	**5.17**	**5.25**	**6.85**	**5.92**	**6.38**	**2,640**	**2,877**	**5,517**
241	219	460	5.13	5.29	5.21	8.77	7.46	8.09	2,769	2,957	5,726
213	195	408	5.89	4.82	5.38	7.52	6.52	6.99	2,881	3,031	5,912
219	195	414	7.06	5.36	6.18	7.54	6.40	7.00	2,882	3,104	5,986
282	233	515	5.07	4.76	5.06	9.78	7.54	8.62	2,924	3,116	6,040
240	248	488	6.23	5.51	5.88	8.17	8.28	8.23	2,877	3,025	5,902
239	**218**	**457**	**5.86**	**5.13**	**5.54**	**8.36**	**7.24**	**7.78**	**2,867**	**3,047**	**5,914**
287	227	514	6.88	6.45	6.66	9.59	7.47	8.52	3,062	3,091	6,153

TABLE No. 13.

Showing the percentage of recoveries on the average population and admissions for the year ending October 31st, 1917.

Hospitals.	On average population.			On admission.		
	Average population.	Recovered.	Percentage.	Admission.	Recovered.	Percentage.
Brockville	811	42	5.18	210	42	20.0
Hamilton	1,330	48	3.61	320	48	15.0
Kingston	570	75	13.16	156	75	48.0
London	1,170	73	6.24	240	73	30.4
Mimico	683	55	8.05	171	55	32.3
Penetang	365	.....	.....	31	.....	.....
Toronto	1,103	109	9.88	516	109	21.1
Totals	6,032	402	6.66	1,644	402	24.4

TABLE No. 14.

Showing summary of discharges during the year.

———	Male.	Female.	Total.
Discharged, Recovered	206	196	402
" Improved	159	161	320
" Unimproved	12	18	30
" Deported	3	2	5
" Eloped	31	4	35
" Not Insane	2	2	4
Total Number of Discharges	413	383	796

TABLE No. 15.

Deaths in Hospitals.

Hospitals.	No. of Deaths.	Daily average. population.	Percentage of deaths on daily average population.
Brockville	74	811	9.12
Hamilton	111	1,330	8.35
Kingston	41	570	7.19
London	89	1,170	7.60
Mimico	47	683	6.88
Penetang	20	365	5.48
Toronto	132	1,103	12.00
Totals	514	6,032	8.52

TABLE No. 16.

The following table shows the number of beds in each of the Hospitals, number in residence, number of vacancies, over population and applications on file at close of official year.

Asylums.	Number of beds.			Number in residence on 31st October, 1917.			Number of vacancies.			Over population.			Applications on file.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brockville	386	378	764	378	423	801	8	.....	8	.....	45	45	10	8	18
Hamilton	656	639	1,295	721	651	1,372	.....	.....	.....	65	12	77	17	9	26
Kingston	311	268	579	317	263	580	.....	.....	.....	6	5	11	3	2	5
London	511	555	1,066	582	611	1,193	.....	.....	.....	71	27	98	6	12	18
Mimico	340	320	660	346	335	681	.....	.....	.....	6	15	21	31	18	49
Penetang	166	203	369	167	202	369	.....	1	1	1	.....	1	.....	.....	.....
Toronto	426	426	852	551	606	1,157	.....	.....	.....	125	180	305	6	4	10
Totals	2,796	2,789	5,585	3,062	3,091	6,153	8	1	9	274	284	558	73	53	126

TABLE No. 17.

Showing the number of officers and employees in each and all of the Hospitals classified according to the duties performed.

Occupation.	Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Total.
Medical Superintendents	1	1	1	1	1	1	1	7
Assistant Superintendents	1	1	1	.....	1	.....	1	5
Assistant Physicians	.....	1	1	3	2	.....	4	11
Trained Nurses	.....	.....	.....	1	.....	1	.....	2
Dentists	.....	.....	.....	.....	1	.....	1	2
Bursars	1	1	1	1	.....	1	1	6
Bursars' Clerks	1	1	.....	1	1	.....	1	5
Stenographers and Portresses	2	3	2	3	1	1	3	15
Storekeeper and Assistants	1	3	1	2	1	1	1	10
Matrons	.....	1	.....	1	1	1	1	5
Assistant Matrons	.....	2	.....	1	.....	.....	.....	3
Cooks	5	9	3	12	4	2	4	39
Laundresses	4	5	3	5	4	3	6	30
Housemaids	7	4	1	9	2	3	6	32
Seamstresses	1	2	1	2	.....	1	1	8
Tailoresses	1	.....	1	1	1	.....	.....	4
Bakers	1	1	1	1	1	1	1	7
Assistant Bakers	.....	.....	.....	.....	.....	.....	.....	.....
Butchers	1	1	.....	.....	1	.....	1	4
Tailors	1	1	.....	1	.....	.....	1	4
Shoemakers	.....	1	.....	1	.....	.....	.....	2
Laundrymen	1	2	1	2	1	1	.....	8
Engineers and Assistants	3	4	3	3	4	1	2	20
Stokers	7	7	4	15	4	3	5	45
Bricklayers and Masons	1	2	2	2	1	1	1	10
Carpenters	2	3	1	2	1	2	1	12
Painters	1	1	1	1	1	1	.....	6
Farmers	1	1	1	1	1	1	1	7
Farmers' Assistants	10	12	3	6	4	4	2	41
Gardeners	1	1	1	1	1	1	1	7
Assistant Gardeners	1	1	1	2	2	.....	.....	7
Chief Attendants, Male	1	3	1	4	1	1	1	12
Supervisors, Male	9	7	7	12	7	1	11	54
Attendants, Male	22	40	18	37	23	8	15	163
Chief Attendants, Female	2	4	2	2	1	.....	2	13
Supervisors, Female	7	12	1	7	10	4	8	49
Attendants, Female	36	21	34	37	17	10	41	196
Musical Instructresses	.....	.....	.....	.....	.....	.....	.....	.....
Tinsmiths	.....	.....	.....	.....	.....	.....	.....	.....
Totals	133	159	98	180	101	55	125	851

TABLE No. 18.

Statement of Revenue from Paying Patients and Farm and Miscellaneous Revenue.

Hospital.	No. of Paying Patients.	From Paying Patients.	From Farm and Miscellaneous.	Total.
		$ c.	$ c.	$ c.
Brockville	224	28,172 40	6,035 34	34,207 74
Hamilton	517	52,343 49	15,721 81	68,065 30
Kingston	168	22,224 25	1,622 67	23,846 92
London	502	52,353 30	8,946 73	61,300 03
Mimico	306	26,512 70	3,216 52	29,729 22
Penetanguishene	27	2,908 29	2,553 40	5,461 69
Toronto	470	52,879 65	902 41	52,948 44
Totals	2,214	237,394 28	38,998 88	276,393 16
Revenue from Railway Taxation, under 6 Edward VII., Cap. 9, Sec. 4, Sub-sec. 2				127,658 40
				$404,051 56

TABLE No. 19.

COMPARATIVE STATEMENT OF REVENUE.

The following statement shows the revenue received from the Hospitals for each year since 1871, together with the number of paying patients in the Hospitals from year to year:

	No. of Paying Patients.	Revenue.	Increase.	Decrease.
		$ c.	$ c.	$ c.
For the year ending September 30, 1871..	118	14,045 30	.....	.....
" " 1872..	139	19,255 80	5,219 50	.....
" " 1873..	171	16,660 61	.....	2,595 19
" " 1874.	182	20,035 77	3,373 15	.....
" " 1875..	231	21,875 92	1,840 15	.....
" " 1876..	256	21,175 93	.....	699 99
" " 1877..	323	28,093 58	6,917 65	.....
" " 1878..	334	30,103 75	2,010 17	.....
" " 1879..	343	32,398 26	2,794 51	.....
" " 1880..	387	37,653 81	4,755 55	.....
" " 1881..	414	41,066 54	3,412 73	.....
" " 1882..	475	43,937 64	2,871 10	.....
" " 1883..	538	59,922 59	15,984 95	.....
" " 1884..	496	48,135 18	.....	11,787 41
" " 1885..	509	49,620 93	1,485 73	.....
" " 1886..	516	53,030 05	4,309 12	.....
" " 1887..	514	48,742 53	.....	4,287 52
" " 1888..	538	59,638 16	10,895 03	.....
" " 1889..	708	66,670 64	7,032 48	.....
" " 1890..	562	62,754 16	.....	3,916 48
" " 1891..	577	48,507 52	.....	14,246 14
" " 1892..	632	73,240 61	14,733 19	.....
" " 1893..	661	73,415 54	174 93	.....
" " 1894..	697	72,722 04	.....	693 50
" " 1895..	743	68,290 31	.....	4,431 73
" " 1896..	904	97,898 19	29,607 88	.....
" " 1897..	844	100,581 25	2,683 06	.....
" " 1898..	770	72,042 44	.....	28,538 81
" " 1899..	778	74,364 54	2,322 10	.....
" " 1900..	846	81,650 87	7,286 33	.....
" " 1901..	902	90,677 46	9,026 59	.....
" " 1902..	959	101,076 20	10,398 74	.....
" " 1903..	1,029	97,416 03	.....	3,660 17
" " 1904..	1,111	106,167 49	8,751 46	.....
" " 1905..	1,211	114,915 59	8,748 10	.....
For the 3 mos. ending December 31, 1905..	.....	54,897 06	27,403 60	.....
For the year ending December 31, 1906..	1,732	165,404 08	50,488 49	.....
" " 1907..	1,797	166,419 63	1,015 55	.....
" " 1908..	1,878	146,148 77	.....	3,739 24
For the 10 mos. ending October 31, 1909..	1,613	140,048 18	.....	.....
" year " " 1910..	1,891	168,914 54	.....	.....
" " " " 1911..	1,899	183,077 18	14,162 64	.....
" " " " 1912..	1,963	189,096 93	6,019 75	.....
" " " " 1913..	1,976	205,649 41	16,552 48	.....
" " " " 1914..	2,110	213,517 87	7,868 46	.....
" " " " 1915..	2,167	225,178 83	11,660 96	.....
" " " " 1916..	2,209	236,805 83	11,627 00	.....
" " " " 1917..	2,214	237,394 28	588 45	.....

TABLE No. 20.

STATEMENT.

Showing the Expenditure on Maintenance under the different headings of the estimates for the year ending October 31st, 1917.

Headings of Estimates.	Brockville Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang. Hospital.	Toronto Hospital.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Medicines and medical comforts	1,350 46	1,446 34	1,143 88	894 51	1,285 18	209 39	1,332 22
Groceries, provisions and butcher's cattle	50,849 61	96,383 79	40,546 98	75,613 03	40,428 67	18,990 12	82,889 11
Fuel, light and water	32,676 02	36,708 89	34,520 95	38,504 44	18,499 63	22,425 33	21,895 53
Clothing	8,465 02	15,028 66	7,090 08	13,849 78	6,740 43	4,822 87	9,847 06
Laundry and cleaning	2,865 77	2,730 65	1,733 70	4,117 30	2,557 15	967 51	4,482 75
General repairs	6,708 83	10,984 96	8,077 56	12,650 99	5,592 06	2,900 26	10,352 09
Office expenses	1,351 44	1,509 00	747 62	1,471 38	943 16	249 96	1,071 10
Farm expenses	9,842 92	14,370 68	6,682 92	14,704 61	4,566 53	5,904 39	1,119 01
Contingencies	1,758 91	3,299 23	1,615 44	1,495 66	1,185 49	726 51	2,686 47
Total expense	115,868 98	182,372 20	102,159 13	163,301 70	81,798 30	57,196 34	135,675 34
Salaries	56,362 07	64,877 69	43,337 38	71,521 73	44,329 75	25,716 36	52,853 46
Grand Totals	172,231 05	247,249 89	145,496 51	234,823 43	126,128 05	82,912 70	188,528 80

TABLE

Comparative Statement of Average Maintenance Cost per Capital

	Brockville.		Hamilton.		Kingston.	
	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
Days' residence of patients	284,371	277,297	465,283	468,437	208,321	206,429
Average number of patients	779.09	757.64	1,274.74	1,279.88	570.74	564.01
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
MEDICINES	.48	.54	.32	.30	.55	1.03
Medicines and Medical comforts	.48	.54	.32	.30	.55	1.03
PROVISIONS	15.49	13.05	18.48	15.60	17.32	14.96
Breakfast Foods and Cereals	.36	.24	.40	.26	.41	.29
Butter	2.30	2.12	2.92	2.58	2.66	2.61
Coffee and Tea	.40	.38	.50	.47	.33	.36
Eggs	.57	.39	.96	.83	.45	.38
Flour, Bread, etc	3.11	2.34	3.34	2.17	3.07	1.91
Fruit and Vegetables—Fresh	.51	.42	.63	.55	.70	.69
" " Canned and Dried	.82	.65	1.12	.62	.98	.83
Milk	1.20	1.57	1.28	1.53	1.31	1.73
Potatoes	.66	.55	1.19	1.15	1.02	.69
Salt, Spices, Pickles, etc	.11	.10	.07	.06	.13	.18
Sugar and Syrup	1.20	1.00	.85	.83	1.20	1.06
Unenumerated Groceries	.84	.89	1.07	1.17	1.03	.83
Butchers' Meat	3.04	1.97	3.74	2.85	3.45	2.72
Fish and Fowl	.37	.43	.41	.53	.58	.68
FUEL, LIGHT AND WATER	10.20	7.59	6.01	4.74	11.18	7.63
Coal and Wood	8.36	5.37	4.58	3.29	11.11	7.57
Electricity	.18	.64	.54	.47	.....	.....
Gas	.33	.41	.24	.26	.....	.....
Oil, Candles, Matches, etc	.11	.07	.01	.02	.07	.06
Water	1.22	1.10	.64	.70	.....	.....
CLOTHING	3.41	2.26	1.88	1.74	3.43	2.70
Clothing—Dry Goods	2.63	1.47	1.53	1.14	2.80	2.03
Boots, Shoes, etc	.78	.79	.35	.60	.63	.67
LAUNDRY AND CLEANING	.99	.82	.59	.59	.87	1.06
Brushes, Brooms and Mops	.15	.14	.11	.10	.21	.29
Miscellaneous Expenses	.29	.20	.15	.17	.20	.25
Soap	.55	.48	.33	.32	.46	.52
GENERAL REPAIRS	2.05	2.14	1.81	1.55	4.08	3.31
Furniture and Furnishings	1.32	1.58	1.26	1.18	2.95	2.41
Plant	.73	.56	.55	.37	1.13	.90
OFFICE EXPENSES	.47	.45	.32	.34	.37	.47
Miscellaneous Items	.14	.18	.14	.17	.15	.23
Postage	.19	.16	.10	.09	.12	.12
Telephone and Telegraph	.14	.11	.08	.08	.10	.12
SALARIES	17.66	16.32	12.44	12.04	19.43	18.95
Supt. and Physicians	1.78	1.76	1.30	1.39	2.09	2.59
Bursar and Assistants	1.55	1.43	1.44	1.24	1.96	1.95
Matron and Assistants	2.88	2.72	2.57	2.37	2.30	2.60
Engineer and Assistants	2.17	1.96	1.23	1.09	2.20	1.94
Artisans, not Domestic	1.04	.80	.76	.54	1.40	1.22
Teachers	.....	.....	.....	.....	.....	.....
Attendants and Nurses	8.25	7.65	5.07	5.27	9.27	8.59
Temporary Assistance	.02	.....	.07	.14	.21	.06

No. 21.

per Day for the Twelve Months ending 31st October, 1917.

London.		Mimico.		Orillia.		Penetang.		Toronto.		Woodstock.	
This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
425,667	416,844	237,583	238,598	343,158	300,303	133,417	133,113	360,249	368,109	76,411	75,726
1,116.21	1,138.92	650.91	651.91	940.16	820.50	365.39	363.70	986.99	1,005.76	209.35	206.90
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
.21	.32	.54	.50	.55	.48	.15	.24	.37	.37	.87	.83
.21	.32	.54	.50	.55	.48	.15	.24	.33	.37	.87	.83
15.36	13.41	15.56	11.93	11.82	10.98	12.15	11.00	17.96	14.38	16.03	14.26
.41	.24	.55	.28	.37	.22	.28	.20	.33	.19	.31	.21
2.59	2.51	2.72	2.31	1.91	2.53	2.21	2.09	2.80	2.51	3.21	2.99
.64	.69	.36	.38	.34	.32	.47	.57	.48	.49	.41	.38
.29	.29	.35	.21	.30	.30	.01	.02	.62	.57	.07	.06
2.86	1.94	2.98	1.98	3.40	2.38	2.93	1.94	2.76	1.62	2.66	2.17
.25	.44	.62	.37	.48	.41	.54	.36	.47	.31	.87	.63
.50	.41	.67	.27	.53	.49	.45	.44	1.00	.81	1.03	1.04
1.61	1.38	1.31	1.10	.97	1.14	1.42	1.74	1.78	1.53	2.72	2.62
.40	.51	.24	.57	.13	.24	.53	.44	1.24	1.02	1.08	.93
.06	.07	.08	.06	.07	.04	.03	.02	.08	.08	.01	.06
1.23	1.05	1.00	.77	.92	.77	.40	.34	.99	.83	1.15	.99
.88	.82	.80	.57	.73	.77	.77	.96	.93	.78	.40	.43
3.24	2.38	3.51	2.56	1.42	1.06	1.67	1.41	3.77	2.98	1.28	1.02
.40	.68	.37	.50	.25	.31	.44	.47	.71	.66	.83	.73
7.81	5.79	7.20	5.89	6.94	4.00	7.66	6.51	5.39	5.87	9.35	8.06
7.12	4.99	6.71	5.35	6.24	3.21	5.37	4.79	3.66	4.04	5.72	4.92
.55	.60	.40	.45	.54	.61	.11	.18	.20	.21	.74	.80
.12	.17	.....	.....	.....	.....	.....	.....	.62	.80	.....	.....
.02	.03	.09	.09	.02	.02	.13	.03	.05	.04	.03	.03
.....	.....	.....	.....	.14	.16	2.05	1.51	.86	.78	2.86	2.31
2.93	2.25	2.14	2.08	3.34	3.02	3.02	2.40	1.09	1.70	.64	.27
2.41	1.51	1.75	1.58	2.47	2.26	2.14	1.66	.75	1.38	.46	.12
.52	.74	.39	.50	.87	.76	.88	.74	.34	.32	.18	.15
.98	1.10	1.05	1.10	.86	1.04	.55	.50	1.10	.88	1.37	.93
.18	.18	.18	.16	.13	.19	.10	.09	.13	.12	.15	.10
.20	.25	.28	.29	.11	.15	.20	.15	.24	.24	.61	.25
.60	.67	.59	.65	.62	.70	.25	.26	.73	.52	.63	.58
2.82	2.54	2.15	2.14	2.76	2.48	1.81	1.45	4.37	2.20	2.43	1.69
2.17	2.11	1.59	1.78	1.98	1.72	1.12	1.16	3.81	1.96	1.61	.86
.65	.43	.56	.36	.78	.76	.69	.29	.56	.24	.82	.83
.33	.35	.40	.43	.25	.28	.18	.20	.30	.30	.34	.39
.16	.18	.13	.15	.07	.09	.06	.07	.14	.15	.09	.11
.10	.10	.14	.14	.13	.13	.05	.06	.05	.05	.14	.14
.07	.07	.13	.14	.05	.06	.07	.07	.11	.10	.11	.14
15.21	13.79	16.73	15.55	10.08	10.64	16.92	15.91	14.08	13.43	19.41	18.76
1.32	1.27	2.64	2.53	1.64	1.90	2.79	2.70	1.96	1.67	5.23	5.02
1.31	1.26	1.15	1.52	.98	.97	2.02	1.88	1.60	1.54	2.56	2.54
2.75	2.59	2.50	2.33	2.29	2.59	2.71	2.95	2.28	2.31	3.71	3.85
2.04	1.41	1.96	1.90	1.06	.85	1.90	1.78	1.07	.96	1.10	1.15
.85	.97	.82	.79	.52	.56	1.97	1.80	.65	.61	1.05	.95
.....	.....	.....	.....	.35	.41	.....	.....	.....	.....	.....	.....
6.83	6.29	7.66	6.48	3.24	3.33	5.53	4.80	6.54	6.31	5.62	5.22
.11	.....	.....	.....	.....	.03	.....	.....	.....	.03	.08	.03

TABLE

Comparative Statement of Average Maintenance Cost per Capital

	Brockville.		Hamilton.		Kingston.	
	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
Days' residence of patients	284,371	277,297	465,283	468,437	208,321	206,429
Average number of patients	779.09	757.64	1,274.74	1,279.88	570.74	564.01
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
ALLOWANCES	**5.70**	**4.69**	**4.21**	**2.93**	**5.79**	**5.55**
Employees' Meals	5.39	4.32	3.89	2.65	5.60	4.97
" Uniforms	.16	.22	.27	.22	.18	.31
" Other Allowances	.15	.15	.05	.06	.01	.27
FARM AND GARDEN	**7.13**	**6.92**	**5.73**	**4.79**	**4.81**	**4.82**
Feed and Fodder	3.60	3.58	3.19	2.60	2.67	3.09
Miscellaneous Farm Expenses	1.00	1.12	.63	.59	.49	.47
Seeds, etc	.40	.24	.41	.33	.28	.25
Salaries	2.13	1.98	1.50	1.27	1.37	1.01
CONTINGENCIES	**.65**	**.78**	**.82**	**.65**	**.76**	**.92**
Amusements, Religion, Education	.17	.21	.08	.04	.11	.18
Elopers, Cost of Recovery	.02	.02	.01	.01	.02	.04
Freight, Duties, etc	.13	.08	.11	.08	.15	.11
Ice	.04	.08	.18	.14	.01	.....
Incidental Expenses	.26	.30	.39	.33	.45	.49
Officers' Travelling Expenses	.03	.09	.05	.05	.02	.10
Per Capita cost per day, less Salaries	38.74	32.57	34.46	29.03	42.00	35.89
" " " " " of Salaries	25.52	22.99	18.15	16.24	26.59	25.51
Total gross per Capita cost per day	64.26	55.56	52.61	45.27	68.59	61.40
Less total recovery per Capita per day	**16.66**	**15.87**	**18.10**	**15.39**	**15.36**	**14.97**
Net per Capita burden payable by Province	47.60	39.69	34.51	29.88	53.23	46.43

N.B.—The accompanying is a Comparative Statement of the cost of maintenance per patient per day for the twelve months ending 31st October, 1917, in the nine Hospitals for the Insane, as compared with the twelve months ending 31st October, 1916, based on actual consumption and calculated to two places of decimals of a cent. The figures in black-faced type represent totals.

Under the headings "Provisions" and "Clothing" is shown the actual consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included under the heading "Allowances."

Where no charge is shown for light or water, these are included in the cost of coal.

No. 14—*Concluded.*

per Day for the Twelve Months ending 31st October, 1917.—*Concluded.*

London.		Mimico.		Orillia.		Penetang.		Toronto.		Woodstock.	
This Year	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
425,667	416,844	237,583	238,598	343,158	300,303	133,417	133,113	360,249	368,109	76,411	75,726
1,116.21	1,138.92	650.91	651.91	940.16	820.50	365.39	363.70	986.99	1,005.76	209.35	206.90
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
4.55	**4.10**	**4.84**	**4.34**	**3.39**	**3.26**	**4.75**	**4.03**	**4.31**	**3.72**	**6.97**	**5.87**
4.25	3.80	4.40	3.92	3.25	3.08	4.41	3.76	4.03	3.35	6.46	5.31
.27	.27	.28	.28	.11	.16	.20	.11	.26	.32	.18	.24
.03	.03	.16	.14	.03	.02	.14	.16	.02	.05	.33	.32
5.84	**5.01**	**5.27**	**4.90**	**3.15**	**2.97**	**7.00**	**6.01**	**.84**	**.70**	**15.07**	**15.88**
3.22	2.51	2.28	2.02	1.66	1.47	4.07	3.04	.13	.18	8.17	7.24
.58	.61	.72	.96	.42	.91	.45	.40	.11	.08	1.30	3.68
.45	.48	.35	.35	.17	.16	.13	.34	.01	.03	.74	.80
1.59	1.41	1.92	1.57	.90	.43	2.35	2.23	.59	.41	4.86	4.16
.35	**.50**	**.49**	**.51**	**.32**	**.35**	**.52**	**.38**	**.75**	**.77**	**.25**	**.33**
.09	.09	.11	.10	.07	.07	.04	.01	.07	.05	.05	.03
.01	.02	.01	.....	.....	.....	.....	.....	.01	.....	.....	.....
.04	.04	.04	.04	.12	.10	.15	.09	.17	.09	.07	.06
.....	.....	.13	.14	.....	.....	.....	.....	.31	.27	.....	.....
.19	.34	.20	.23	.11	.16	.31	.26	.16	.28	.10	.23
.02	.01	.....	.....	.02	.02	.02	.02	.03	.08	.03	.01
35.04	29.86	32.88	27.91	29.09	25.17	30.69	26.46	31.58	26.76	41.49	38.48
21.35	19.30	23.49	21.46	14.37	14.33	24.02	22.17	18.98	17.56	31.24	28.79
56.39	49.16	56.37	49.37	43.46	39.50	54.71	48.63	50.56	44.32	72.73	67.27
18.06	**15.00**	**18.39**	**14.87**	**7.10**	**7.82**	**9.01**	**6.98**	**14.83**	**14.25**	**38.02**	**34.97**
38.33	34.16	37.98	34.50	36.36	31.68	45.70	41.65	35.73	30.07	34.71	32.30

TABLE

Comparisons, Appropriation, Expenditure, Consumption, Population

—		Brockville.	Hamilton.	Kingston.
Days' residence of patients,		284.371	465.283	208.321
Average number of patients		779.09	1,274.74	570.74
Medicines	Appropriation	$1,800 00	$1,800 00	$1,800 00
	Expenditure	**1,350 46**	**1,446 34**	**1,143 88**
	Consumption	1,350 46	1,504 02	1,149 85
Provisions	Appropriation	51,000 00	97,000 00	43,000 00
	Expenditure	**50,849 61**	**96,383 79**	**40,546 98**
	Consumption	44,045 20	85,962 12	36,086 41
Fuel, Light and Water	Appropriation	36,000 00	40,000 00	35,000 00
	Expenditure	**32,676 02**	**36,708 89**	**34,520 95**
	Consumption	29,017 23	27,984 69	23,296 97
Clothing, etc	Appropriation	8,500 00	17,500 00	7,500 00
	Expenditure	**8,465 02**	**15,028 66**	**7,090 08**
	Consumption	9,695 95	8,740 31	7,145 17
Laundry, etc	Appropriation	3,000 00	3,500 00	3,000 00
	Expenditure	**2,865 77**	**2,730 65**	**1,733 70**
	Consumption	2,812 35	2,779 66	1,814 75
General Repairs, etc	Appropriation	7,000 00	13,000 00	8,500 00
	Expenditure	**6,708 83**	**10,984 96**	**8,077 56**
	Consumption	5,835 91	8,422 30	8,498 40
Office	Appropriation	1,500 00	1,800 00	1,500 00
	Expenditure	**1,351 44**	**1,509 00**	**747 62**
	Consumption	1,352 04	1,483 94	765 79
Salaries	Appropriation	65,862 00	81,020 00	58,350 00
	Expenditure	**56,362 07**	**64,877 69**	**43,337 38**
	Consumption	66,518 09	77,470 61	52,546 52
Farm, etc	Appropriation	10,000 00	15,500 00	7,000 00
	Expenditure	**9,842 92**	**14,370 68**	**6,682 92**
	Consumption	20,278 98	26,647 36	10,034 38
Contingencies	Appropriation	2,600 00	3,850 00	2,350 00
	Expenditure	**1,758 91**	**3,299 23**	**1,615 44**
	Consumption	1,853 27	3,793 98	1,597 96
Total Maintenance	Appropriation	187,262 00	274,970 00	168,200 00
	Expenditure	**172,231 05**	**247,339 89**	**145,496 51**
	Consumption	182,759 48	244,788 99	142,936 20
Capital Accounts	Appropriation	36,100 00	26,300 00	18,900 00
	Expenditure	**25,552 26**	**20,646 36**	**7,203 65**
Grand Totals	Appropriation	223,362 00	301,270 00	187,100 00
	Expenditure	**197,783 31**	**267,986 25**	**152,700 16**
REVENUE COLLECTIONS.				
From paying patients this year to date		28,172 40	52,343 49	22,224 25
" " last "		26,672 62	51,041 71	21,972 08
Patients Revenue per capita this year	cents	**9.91**	**11.25**	**10.67**
" " " last "	cents	9.62	10.89	10.64
From Farm and Misc. Sales this year		**$6.035 34**	**15,721 81**	**1,622 67**
" " last "		3,274 51	2,710 37	870 87
Farm and Misc. Revenue per capita this year	cents	**2.12**	**3.37**	**.78**
" " " last "	cents	1.18	.58	.42
Total Revenue this year		**$34,207 74**	**68.065 30**	**23,846 92**
" last "		29,947 13	53,752 08	22,842 95
Total Revenue per capita per day this year	cents	**12.03**	**14.62**	**11.45**
" " " last "	cents	10.80	11.47	11.06
Farm Production Consumption this year	cents	**4.63**	**3.48**	**3.91**
" " last "	cents	5.07	3.92	3.91
Total Recovery per capita this year	cents	**16.66**	**18.10**	**15.36**
" " last "	cents	15.87	15.39	14.97

No. 22.

and Revenue for the Twelve Months ending 31st October, 1917.

London.	Mimico.	Orillia.	Penetang.	Toronto.	Woodstock.
425,667	237,583	343.158	133,417	360,249	76,411
1,166.21	650.91	940.16	365.39	986.99	269.35
$1,800 00	$1,506 00	$2,100 00	$750 00	$1,800 00	$900 00
894 51	1,285 18	1,880 64	209 39	1,332 22	665 47
894 51	1,285 18	1,880 64	209 92	1,332 22	665 47
78,000 00	41,000 00	59.000 00	19.000 00	87,000 00	15,000 00
75,613 03	40,428 67	50.523 40	18,990 12	82,889 11	14,991 58
65,342 24	36,970 84	40,567 30	16,205 76	64,696 51	12,250 50
58,000 00	28,000 00	43.000 00	26,600 00	27,500 00	8,500 00
38,504 44	18,499 63	42,877 48	22,425 33	21,895 53	7,976 97
33,264 06	17,099 65	23,801 24	10,224 07	19,417 16	7,145 34
14,250 00	7,500 00	14,000 00	5,300 00	10,000 00	2,000 00
13,849 78	6,740 43	13,949 11	4,822 87	9,847 06	572 34
12,485 97	5,085 73	11,450 45	4,023 75	3,941 87	487 49
4,500 00	3,000 00	3,500 00	1,500 00	4.500 00	1,500 00
4,117 30	2,557 15	2,884 01	967 51	4,482 75	1,129 22
4,165 09	2,477 42	2,959 27	728 19	3,970 52	1,051 09
14,500 00	7,000 00	9,000 00	3,000 00	10,500 00	2,200 00
12,650 99	5,592 06	8,997 54	2,900 26	10,352 09	1,943 32
12,004 87	5,111 79	9,495 08	2,418 12	15,739 24	1,854 24
1,500 00	1,200 00	1,200 00	600 00	1,500 00	500 00
1,471 38	943 16	894 29	249 96	1,071 10	422 63
1,414 55	948 52	846 71	249 96	1,083 60	259 74
79,860 00	54,165 00	52,542 00	30,618 00	67,222 00	21,566 00
71,521 73	44,329 75	37,694 73	25,716 36	52,853 46	18,545 89
84,099 72	51,253 86	46,237 34	28,922 93	66,255 03	20,154 39
15,000 00	5,000 00	6,800 00	6,300 00	3,700 00	4,500 00
14,704 61	4,566 53	6,393 59	5,904 39	1,119 01	4,494 46
24,859 08	12,533 27	10,801 83	9,325 56	3,042 61	11,514 60
2,500 00	2,200 00	1,900 00	1,150 00	3,500 00	1,000 00
1,495 66	1,185 49	1,249 21	726 51	2,686 47	239 92
1,504 97	1,166 14	1,116 99	687 80	2,686 47	192 02
269,910 00	150,565 00	193,042 00	94,818 00	217,222 00	57,666 00
234,823 43	126,128 05	167,344 00	82,912 70	188,528 80	50,981 80
240,035 06	133,932 40	149,156 85	72,996 06	182,165 23	55,574 88
34,000 00	26,300 00	54,300 00	11,900 00	143,800 00	9,000 00
24,201 69	20,646 36	15,991 08	7,630 65	135,296 68	2,438 03
303,910 00	176,865 00	247,342 00	106,718 00	361,022 00	66,666 00
259,025 12	146,774 41	183,335 08	90,543 35	323.825 48	53,419 83
52,353 30	26,512 70	14,487 59	2,908 29	52,046 03	17,872 88
43,635 45	24,371 65	10,405 99	2,157 17	51,553 29	14,041 52
12.30	11.16	4.22	2.18	14.45	23.39
10.47	10.21	3.47	1,62	14.00	18.53
8,946 73	3,216 52	2,417 21	2,553 40	902 41	4,243 55
4,653 06	1,298 57	4,717 47	1,972 22	622 26	3,509 85
2.10	1.35	.70	1.91	.25	5.55
1.12	.54	1.57	1.48	.17	4.63
61,300 03	29,729 22	16,904 80	5,461 69	52,948 44	22,116 43
48,288 51	25,670 22	15,123 46	4,129 39	52,175 55	17,551 37
14.40	12.51	4.92	4.09	14.70	28.94
11.59	10.75	5.04	3.10	14.17	23.16
3.66	5.88	2.18	4.92	.13	9.08
3.41	4.12	2.78	3.88	.08	11.81
18.06	18.39	7.10	9.01	14.83	38.02
15.00	14.87	7.82	6.98	14.25	34.97

Notes on per Capita Statement.

Attached hereto is a statement of the cost of maintenance per patient per day for the year ending October 31st, 1917, in the nine hospitals mentioned, as compared with the year 1916, being based on actual consumption.

It follows out the order of the sub-divisions of appropriations voted by the Legislature, and is calculated to two places of decimals of a cent. The figures in black-faced type represent totals.

Invoices for all purchases, properly certified by the Bursar and the Storekeeper, as to accuracy and receipt of goods, are checked in the Department before being submitted to the Treasury for payment.

A system of Daily Requisitions for all supplies, such as provisions, is carried out and these requisitions are forwarded to the Department semi-weekly. In case of coal, the amount consumed on each shift is weighed and weekly report of consumption made by the engineer.

Under headings "Provisions" and "Clothing" is shown only consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included in the account "Employees' Meals and Uniforms" under the heading "Salaries."

Quarterly inventories of stock are taken at each institution, and are checked with the ledger accounts of the Department.

Returns are made of all products of the Farm and Garden, as received, charges being made against the cost of maintenance, and the Farm and Garden given credit for the same; for this purpose a uniform price list is in use for all institutions, regardless of soil or fertility of farm. At the end of the year the value per patient per day of such products—fruits, vegetables, feed and fodder, meat and eggs—is deducted from the gross per capita cost and appears in the statement as "Farm Recoveries."

Parliament Buildings, Toronto.

Orchard Home, Hospital for Insane, Hamilton.

Main Building, Hospital for Insane, Hamilton.

Main Building and Cottages, Mimico.

Main Building, Hospital for Insane, London.

Nurses' Home, Rockwood Hospital, Kingston.

Main Building, Eastern Hospital for Insane, Brockville.

Garden, Eastern Hospital, Brockville.

APPENDIX

TO FIFTIETH ANNUAL REPORT UPON THE HOSPITALS FOR THE INSANE AND CONTAINING THE ANNUAL REPORTS OF THE MEDICAL SUPERINTENDENTS OF THE HOSPITALS IN BROCKVILLE, HAMILTON, KINGSTON, LONDON, MIMICO, PENETANGUISHENE, TORONTO, AND HOMEWOOD SANITARIUM, GUELPH.

ANNUAL REPORT OF THE MEDICAL SUPERINTENDENT, HOSPITAL FOR THE INSANE, BROCKVILLE, YEAR ENDING OCTOBER 31ST, 1917.

Brockville, February 26th, 1918.

W. W. Dunlop, Esq.,
Inspector of Public Charities.

Sir,—I have the honour to submit the Report of this Hospital for the year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	386	378	764			
In residence October 31st 1916	.....	.....	.....	375	398	773
Admitted during year by Warrant	3	3	6			
Admitted by Certificate	98	106	204	101	109	210
Total number under treatment during year.	.....	.....	.....	476	507	983
Discharged during year recovered	18	24	42			
Discharged during year improved	29	20	49			
Discharged during year unimproved	2	4	6			
Discharged during year not insane	.....	.....	.....			
Total number discharged during year	49	48	97			
Died	39	35	74			
Deported	.....	1	1			
Eloped	10	.....	10			
Transferred	.....	.....	.....	98	84	182
Remaining in Hospital October 31st, 1917	.....	.....	.....	378	423	801

The admissions for the year numbered two hundred and ten, a large number but not quite equal to the preceding year. Of these, one hundred and one were men and one hundred and nine women. Three men and three women were admitted by warrant, and sixteen men and seven women admitted as voluntary patients. The female admissions were somewhat in excess of the males. As usual, a large percentage of our admissions were seniles.

The total number of discharges during the year was ninety-seven; forty-nine men and forty-eight women. Of the males, eighteen were fully recovered, twenty-nine improved and two unimproved. Of the females, twenty-four were recovered, twenty improved and four unimproved. One female was deported. She had made a very fair recovery.

Ten men eloped during the year who were not returned at the time of elopement. We heard from their friends afterwards and they were doing well at home. Some of them had recurrences and have since been returned to the Hospital for treatment.

Our death rate was fairly large but embraced a good many seniles—thirty-nine males and thirty-five females. The total number of discharges, deaths, deports, and elopers was ninety-eight males and eighty-four females, making a total of one hundred and eighty-two. We began the year with a population of 773 and closed with a population of 801.

Although we had a good many deaths during the past year the general health of the Institution was very good.

We found great benefit from the New Admission Hospital this year in the treatment of females awarded. The equipment of this Hospital assisted us very much in giving special treatment to a larger number of cases and the hydrotherapeutic treatment there added very much to that already in use and it has all been taxed to its full capacity during the year in treating newly admitted and disturbed cases. A treatment room is to be installed this year containing the latest hydrotherapeutic and electrical equipment.

As usual our annual sports were very much enjoyed by all. A very large percentage of our patients were able to attend and very many of them took part. The usual exhibit of work done by patients in the re-educational room and women's wards was made and was greatly admired. The lady judges from town had very much difficulty in making the awards, the work being of such a high class. We also had an excellent exhibit of this work at Brockville and at the National Exhibition, Toronto. The exhibit of farm and garden produce at both these places was excellent and reflected great credit on our farm and garden staff.

Many of our patients take an active part in the work on the farms, in the garden and on the lawns. This work is a very considerable factor in restoring normal mental conditions.

Our amusements also play a great part in mental treatment. In the summer we have bowling, tennis, croquet and suitable games; in the winter skating and curling. The long winter evenings are assisted greatly by our dances and moving pictures. These take up two evenings each week.

Excellent work was done in the Training School and the nurses took a very high standing in their examinations. The average standing in all years took high rank as compared with other Institutions of the Province. We find the training school of great benefit as we have a fine class of young ladies now taking this training and they are not only greatly interested in their work but apply themselves diligently to their studies. Their training also shows markedly in their care of the patients.

As we only had one nurse in the graduating class this year we did not have the special graduation exercises but arranged for a special evening's entertainment when this nurse was presented with her diploma and pin.

We have done a great deal of work with our improvements and repairs during the year. The brick work and chimneys of the Main Building and Cottages that had not already been repaired were completed during the year. Our kitchen and pantries were tiled and a good deal of new equipment put in the kitchen. This department now is very complete. The electrical room in the basement was also tiled as were the lavatories, bath-rooms, and pantries in the Main Building. This work is still being continued in the cottages. The tile was furnished from our own plant at Mimico and has added greatly to the sanitary conditions of the building. The work begun last year on the roofing and plumbing of the buildings is well under way and is still being continued for the completion of these improvements.

The returns from the farm for the year have been fairly good considering the season. The grain crop was not quite so heavy as formerly but corn and potatoes were exceptionally good. The general work of the farm has been satisfactory and the returns from the garden exceptionally good.

As in other years we are greatly indebted to the clergymen of the various denominations for the religious services held during the year. We cannot be too grateful to these men, not only for the services held but for their attentiveness and kindness to those who are sick.

Like other institutions we are short-handed. We had two excellent clinics here at work during the summer but for a portion of the year the Assistant Superintendent has been the only medical help I have had. The staff as a whole have been very loyal and have done their best to co-operate in everything undertaken for the uplift of the Institution.

Thanking you for the ready assistance and kindly counsel you have rendered us during the year,

I have the honour to be, Sir,

Your obedient servant,

J. C. Mitchell,

Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, BROCKVILLE, FOR THE YEAR ENDING OCTOBER 31ST, 1917.

TABLE No. 1—BROCKVILLE.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total	Male.	Female.	Total.
Capacity of Hospital	386	378	764			
In Residence October 31st, 1916	.....	.....	.....	375	398	773
Admitted during the year 1917:						
By Warrant	3	3	6			
By Medical Certificate	98	106	204	101	109	210
Total number under treatment during the year 1917	.....	.....	.....	476	507	983
Discharges during year:						
As recovered	18	24	42			
" improved	29	20	49			
" unimproved	2	4	6			
" not insane	.....	.....	.....			
Total number discharged during year	49	48	97			
Died	39	35	74			
Deported	.....	1	1			
Eloped	10	.....	10			
Transferred	.....	.....	.....	98	84	182
Remaining in Hospital October 31st, 1917	49	36	85	378	423	801
Total number admitted since opening of Hospital	.....	.....	.....	1,744	1,719	3,463
Total number discharged since opening of Hospital	661	731	1,392			
Total number died since opening of Hospital	592	479	1,071			
Total number deported since opening of Hospital	13	9	22			
Total number eloped since opening of Hospital	73	2	75			
Total number transferred since opening of Hospital	27	75	102	1,366	1,296	2,662
Total remaining in Hospital October 31st, 1917	.....	.....	.....	378	423	801
Daily average population	385.8	425.3	811.1			
Collective days' stay of all patients in residence during year	11,864	13,253	25,117			
Number of applications on file	10	8	18			

TABLE No. 2—BROCKVILLE.

Showing Social State and Religion of patients admitted during the year and since opening of Hospital.

—	Admissions of Year.			In residence.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	47	47	94	152	170	322	1,005	796	1,801
Married	47	48	95	209	220	429	684	812	1,496
Widowed	6	14	20	14	32	46	52	108	160
Divorced	1	.....	1	1	.....	1	1	.....	1
Separated	.....	.....	.....	2	1	3	2	3	5
Unascertained	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	101	109	210	378	423	801	1,744	1,719	3,463
RELIGION.									
Baptists	2	4	6	15	21	36	51	46	97
Congregationalists	1	1	2	4	7	11	12	5	17
Episcopalians	23	20	43	66	83	149	323	329	652
Methodists	16	19	35	39	62	101	270	326	596
Presbyterians	15	16	31	62	59	121	326	306	632
Roman Catholics	42	42	84	163	165	328	660	635	1,295
Other Denominations	2	7	9	23	18	41	65	60	125
Unascertained	.....	.....	.....	6	8	14	37	12	49
Total	101	109	210	378	323	801	1,744	1,719	3,463

TABLE No. 3—BROCKVILLE.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total admissions	101	109	210	1,744	1,719	3,463
Total born in Canada	91	100	191	1,421	1,429	2,850
Armenia						
Assyria				2	2	4
Austria				7	3	10
Australia						
Belgium						
Bulgaria				1		1
Central America						
China				1		1
Denmark				2		2
England	3	3	6	94	78	172
France				6		6
Finland						
Galicia						
Germany		1	1	6	8	14
Greece						
Holland						
Hungary						
Ireland	2		2	85	110	195
Italy				6		6
Japan						
Macedonia						
Other British Possessions						
Norway				1		1
Roumania						
Russia	1	2	3	9	15	24
Scotland	2	2	4	40	42	82
South America						
Spain				2	1	3
Sweden						
Switzerland	1		1	4		4
United States	1	1	2	37	24	61
West Indies				1		1
Unascertained				19	7	26
Totals	101	109	210	1,744	1,719	3,463

TABLE No. 4—BROCKVILLE.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers. Architects, Artists, Authors, Civil Engineers, Surveyors, etc	3	1	4	36	4	40
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	16	3	19	164	31	195
Agricultural and Pastoral:— Farmers, Gardeners, Stock Men, etc.	33	.....	33	504	.....	504
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	11	.....	11	184	.....	184
Mechanics, etc., at Sedentary Vocations: Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	3	6	9	102	53	155
Domestic Service:— Waiters, Cooks, Servants, etc	.....	13	13	11	266	277
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc	5	85	90	29	1,229	1,258
Miners, Marine Engineers, Railway Employees, Seamen, Soldiers, etc	3	.....	3	32	.....	32
Laborers	26	.....	26	562	.....	562
No Occupation	1	1	2	69	163	182
Unascertained	.....	.....	.....	48	23	74
Totals	101	109	210	1,744	1,719	3,463

TABLE No. 5—BROCKVILLE.

Showing the Counties and Districts from which patients have been admitted during the year. and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant cases.						Remaining in residence.		
							Admitted during year.			Admitted since opening.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	....	....	....	1	.....	1	....	....	....	1	....	1	...	...	....
Brant	....	....	....	.....	1	1	....	....	....	.....	.....	.....	.....	.....	.....
Bruce	....	....	....	4	2	6	....	....	....	2	....	2	1	...	1
Carleton	32	35	67	474	507	981	1	....	1	162	119	281	113	150	263
Dufferin	....	....	....	.....	.....	.....	....	....	....	.....	.....	.....	.....	.....	.....
Dundas	3	5	8	86	88	174	....	....	....	1	....	1	11	8	19
Durham	....	2	2	6	8	14	....	....	....	.....	.....	.....	...	3	3
Elgin	....	....	....	4	4	8	....	....	....	3	1	4	...	...	....
Essex	....	....	....	7	4	11	....	....	....	4	4	8	2	1	3
Frontenac	....	....	....	18	17	35	....	....	....	7	7	14	3	6	9
Glengarry	4	9	13	99	101	200	....	....	....	1	1	2	16	20	36
Grenville	5	5	10	130	140	270	....	1	1	1	2	3	19	24	43
Grey	....	....	....	3	1	4	....	....	....	1	1	2	...	...	....
Haldimand	....	....	....	3	.....	3	....	....	....	3	....	3	1	...	1
Halton	....	....	....	2	.....	2	....	....	....	1	....	1	1	...	1
Hastings	....	....	....	13	26	39	....	....	....	7	17	24	4	5	9
Huron	....	....	....	5	3	8	....	....	....	3	....	3	2	...	2
Kent	....	....	....	7	1	8	....	....	....	4	....	4	2	...	2
Lambton	....	....	....	8	1	9	....	....	....	5	1	6	3	...	3
Lanark	7	5	12	169	171	340	....	1	1	33	23	56	35	37	72
Leeds	29	21	50	244	226	470	....	....	....	32	19	51	45	60	105
Lennox and Addington	1	....	1	5	5	10	....	....	....	4	5	9	2	1	3
Lincoln	....	....	....	3	2	5	....	....	....	2	2	4	...	1	1
Middlesex	....	....	....	18	16	34	....	....	....	10	6	16	...	2	2
Muskoka District	....	....	....	1	.....	1	....	....	....	.....	.....	.....	.....	.....	.....
Nipissing District	1	1	2	4	2	6	....	....	....	.....	.....	.....	1	...	1
Norfolk	....	....	....	2	.....	2	....	....	....	1	....	1	...	...	....
Northumberland	....	....	....	7	4	11	....	....	....	6	3	9	3	...	3
Ontario	....	....	....	4	9	13	....	....	....	4	7	11	...	1	1
Oxford	....	....	....	5	3	8	....	....	....	5	1	6	1	...	1
Temiskaming	....	....	....	.....	1	1	....	....	....	.....	.....	.....	...	1	1
Peel	....	....	....	4	2	6	....	....	....	2	....	2	1	...	1
Perth	....	....	....	6	1	7	....	....	....	6	....	6	2	1	3
Peterborough	....	....	....	4	2	6	....	....	....	4	2	6	1	...	1
Prescott	3	7	10	88	99	187	1	1	2	40	38	78	25	35	60
Prince Edward	....	....	....	2	3	5	....	....	....	1	1	2	...	...	....
Rainy River District	....	....	....	.....	.....	.....	....	....	....	2	2	4	...	...	....
Renfrew	3	4	7	23	27	50	....	....	....	8	5	13	6	8	14
Russell	3	3	6	59	56	115	1	....	1	4	....	4	19	19	38
Simcoe	1	....	1	8	3	11	....	....	....	5	2	7	3	...	3
Stormont	9	10	19	144	120	264	....	....	....	40	11	51	35	31	66
Thunder Bay District	....	....	....	3	.....	3	....	....	....	.....	.....	.....	2	...	2
Victoria	....	....	....	2	8	10	....	....	....	2	7	9	...	...	....
Waterloo	....	....	....	2	.....	2	....	....	....	1	....	1	...	...	....
Welland	....	....	....	3	1	4	....	....	....	3	....	3	1	1	2
Wellington	....	....	....	1	3	4	....	....	....	1	....	1	...	...	....
Wentworth	....	....	....	4	5	9	....	....	....	3	2	5	2	1	3
York	....	1	1	52	43	95	....	....	....	43	35	78	16	7	23
Unascertained	....	1	1	7	3	10	....	....	....	1	1	2	...	...	....
Totals	101	109	210	1,744	1,719	3,463	3	3	6	469	325	794	378	423	801

TABLE No. 6—BROCKVILLE.

Showing the assigned Causes of Insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	1	8	9	2	1	3	6
Mental Strain, Worry and Overwork (not included in above)	23	26	49	10	12	22	27
Religious Excitement	.....	2	2	.....	1	1	1
Love Affairs, including seduction	2	.....	2	.....	1	1	1
Fright and Nervous Shock	.....	.....	.....	.....	.....	.....	.....
PHYSICAL.							
Alcoholism	2	.....	2	1	.....	1	1
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	1	.....	1	1	.....	1	.....
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	2	.....	2	2	.....	2	.....
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	3	3	.....	3	3	.....
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	4	4	.....	3	3	1
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	5	4	9	3	2	5	4
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	2	.....	2	2	.....	2	.....
Senility	11	17	28	5	6	11	17
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	4	2	6	1	1	2	4
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	1	1	2	1	1	2	.....
Other Bodily Diseases	1	.....	1	1	.....	1	.....
HEREDITARY.							
Congenital Defect	6	8	14	2	3	5	9
Unascertained	40	34	74	8	17	25	49
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	101	109	210	39	51	90	120

TABLE No. 7—BROCKVILLE.

Showing hereditary tendency to insanity in patients admitted during the year and since the opening of the Hospital.

	Admitted During Year.			Since Opening.		
	Male.	Female.	Total.	Male	Female.	Total.
Paternal Branch	11	14	25	215	208	423
Maternal Branch	10	10	20	184	201	385
Paternal and Maternal Branches	3	4	7	67	56	123
Collateral Branches	3	3	6	222	239	461
No Hereditary Tendency	43	29	72	732	643	1,375
Unascertained	31	49	80	324	372	702
Totals	101	109	210	1,744	1,719	3,463

TABLE No. 8—BROCKVILLE.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Discharge	26	35	61
Discharged, Recovered	10	19	29
" Improved	16	13	29
" Unimproved	.....	3	3
Died	.....	.....	.....
Returned to Hospital	13	9	22
Absent on Probation on October 31st, 1917	7	12	19

TABLE No. 9—BROCKVILLE.

Showing the Causes of Death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	.....	1	1
Influenza	.....	.....	.....	3	2	5
Cerebro-spinal Meningitis	.....	.....	.....	1	1	2
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	1	1	3	4	7
Septicæmia	.....	.....	.....	6	7	13
Dysentery	.....	1	1	6	14	20
Syphilis	.....	.....	.....	.....	1	1
Tuberculosis	9	7	16	92	95	187
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	.....	1	1
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	1	1	.....	1	1
Diseases of the Digestive System:—						
Mouth, salivary glands	.....	.....	.....	.....	1	1
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	1	1	.....	1	1
Diseases of the Intestines:—						
Diseases of the Liver	1	.....	1	6	4	10
" " Pancreas	.....	.....	.....	.....	.....	.....
" " Peritoneum	.....	1	1	5	7	12
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	2	.....	2
" " Bronchi	.....	.....	.....	4	1	5
" " Lungs	2	1	3	25	24	49
" " Pleura	.....	.....	.....	1	1	2
Diseases of the Circulatory System:—						
Diseases of the Pericardium	1	1	2	1	1	2
" " Heart	1	3	4	48	38	86
Arterio-sclerosis	10	5	15	51	41	92
Aneurism	.....	.....	.....	.....	.....	.....
Diseases of the Blood and Ductless Glands:—						
Anæmia	.....	.....	.....	3	2	5
Pernicious Anæmia	.....	.....	.....	.....	.....	.....
Leukæmia	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....
Diseases of the Genito-Urinary System	1	1	2	19	11	30
Carried forward	25	23	48	277	259	536

TABLE No. 9—BROCKVILLE—*Continued.*

Showing the Causes of Death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	25	23	48	277	259	536
Diseases of the Nervous System:—						
Diseases of the Nerves	.....	.....	.....	1	.....	1
" " Spinal Cord	.....	.....	.....	2	.....	2
" " Meninges	.....	.....	.....	.....	5	5
Organic Diseases of the Brain: (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	1	.....	1	31	17	48
Functional Nervous Diseases: (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	.....	.....	.....	1	2	3
Epilepsy	1	1	2	54	25	79
Mental Diseases:—						
Exhaustion of Acute Mental Disease	5	8	13	22	43	65
Exhaustion of Chronic Mental Disease	.....	.....	.....	69	47	116
General Paresis	6	.....	6	60	10	70
Intoxications:—						
Alcoholism	.....	.....	.....	.....	.....	.....
Morphinism	.....	.....	.....	.....	.....	.....
Metallic Poisoning	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	.....	.....
Debility of Old Age	.....	.....	.....	51	46	97
Accident	.....	.....	.....	.....	1	1
Suicide	1	1	2	9	5	14
Surgical Diseases	.....	2	2	2	5	7
Gynæcological Diseases	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer	.....	.....	.....	13	13	26
Totals	39	35	74	592	479	1,071

TABLE No. 10—BROCKVILLE.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	....	....	....	....	....	....	....
(b) Infection Delirium	....	....	....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	....	....	1	1	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	....	....	....	....	....	....	....	....	....
(c) Neurasthenia	5	3	8	5	3	8	1	....	1
Intoxication Psychoses:—									
(a) Acute Intoxications	3	4	7	....	4	4	....	1	1
(b) Chronic "	....	....	....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	4	....	4	3	....	3	1	....	1
(b) Delirium Tremens	....	....	....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	....	....	....	....	2	....	2
(d) Acute Alcoholic Hallucinosis	....	....	....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	....	....	....	....	....	....	....
(f) " Paranoia	....	....	....	....	....	....	....	....	....
(g) " Paresis	....	....	....	....	....	....	....	....	....
(h) Morphinism	3	....	3	2	....	2	....	....	....
(i) Cocainism	....	....	....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	....	....	....	....	....	....	....
(b) Cretinism	....	....	....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	4	5	9	1	4	5	2	2	4
(b) Catatonic	17	30	47	9	13	22	3	4	7
(c) Paranoid	5	8	13	6	3	9	....	2	2
General Paresis	5	1	6	2	1	3	8	1	9
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	....	....	....	....	1	1	....	....	....
(c) Multiple Sclerosis	....	....	....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	....	....	....	....	....	....	....	....
(g) Cerebral Tumor, Abscess, Hæmorrhage	1	....	1	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	1	3	4	....	1	1	2	3	5
(b) Pre-senile Delusional Psychoses	1	1	2	....	....	....	....	....	....
(c) Senile Dementia	16	20	36	1	3	4	8	10	18
Manic Depressive Psychoses:—									
(a) Manic States	7	13	20	4	6	10	2	6	8
(b) Depressed States	15	12	27	6	5	11	6	4	10
(c) Mixed States	....	....	....	....	....	....	....	....	....
Carried forward	87	100	187	39	45	84	35	33	68

TABLE No. 10—BROCKVILLE—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	87	100	187	39	45	84	35	33	68
Paranoia	1	1	2	3	1	4	....	....	....
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	6	3	9	2	1	3	1	2	3
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	5	5	10	4	1	5	3	....	3
(b) Idiocy	1	....	1	....	....	....	....	....	....
Not Diagnosed	1	....	1	1	....	1	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	101	109	210	49	48	97	39	35	74

TABLE No. 11—BROCKVILLE.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	30	17	2	3	2	13
From 1 to 2 months	18	14	2	6	2	3
" 2 " 3 "	23	12	4	4	1	4
" 3 " 4 "	4	14	6	4	.....	3
" 4 " 5 "	2	9	2	1	.....	4
" 5 " 6 "	40	8	2	2	.....	2
" 6 " 9 "	4	28	10	10	.....	3
" 9 " 12 "	25	27	8	5	.....	5
" 12 " 18 "	1	34	3	7	.....	5
" 18 months to 2 years	16	42	.....	1	.....	5
" 2 to 3 years	10	50	.....	3	.....	3
" 3 " 4 "	6	33	1	2	.....	5
" 4 " 5 "	6	43	1	.....	1	.....
" 5 " 10 "	12	187	.....	1	.....	5
" 10 " 15 "	4	115	1	.....	.....	7
" 15 " 20 "	2	106	.....	.....	.....	5
" 20 years and upwards.	7	62	.....	.....	.....	2
Totals	210	801	42	49	6	74

HOSPITAL FOR THE INSANE, HAMILTON.

December 27, 1917.

W. W. Dunlop, Esq.,
Inspector Hospitals for Insane,
Parliament Buildings, Toronto, Ontario.

Sir,—In compliance with the Statutes I beg herewith to submit the forty-second annual report of this Hospital, being for the year ending October 31st, 1917.

Owing to the exigencies arising from the need of increased accommodation for our returning soldiers, causing the removal of thirty-five insane criminals from the Ontario Reformatory, Guelph, their transfer added considerably to our already large admission list, and from the character of these cases the percentage of our discharges, when compared with admissions as in other periods, was lessened.

The number admitted was 320 and those discharged as recovered or sufficiently improved to return to their homes and vocations was 139, or 43.43 per cent. of the admissions.

We are pleased to report that notwithstanding the crowded state of our male wards, we suffered from no epidemics or contagious diseases.

We have been very short of employees both on the wards and farm, yet we are proud to report that the conscription of men for military duty will affect us very slightly, as almost every eligible man in the service has enlisted voluntarily and nobly gone forward to bear his and our share of the burden in France and Flanders.

More of our beloved boys have fallen by the way and we honour and mourn the loss of Herbert Whittle and Frederick Hyland, than whom we never had more faithful or efficient in our service.

New Work.

We were pleased indeed to have the privilege of breaking sod and starting the construction of what promises to be one of the best arranged and most fully equipped central boiler house plants in the Province, and feel assured that in a few years in the saving of fuel and labour the primary outlay will be fully met.

From East House 72 women were removed and the whole building fitted up with steel grills and window guards and in every way made suitable for the reception and care of criminals for which purpose it had been set aside in 1900 by the Legislature, and in this building were placed our new patients from the Ontario Reformatory.

Requirements.

When arrangements were requested for the reception of the Reformatory patients, it was agreed that additional bed accommodation would be provided and we are consequently pleased to know that consent has been given for the preparation of plans for a 100 bed addition, which will be placed on our distant farm, in conjunction with the privileged section now there, and it is hoped that ere another fiscal year closes, it will be fit for occupancy—our special reason for suggesting the location of the addition at Hickory Farm was that the fast developing 32-acre orchard located thereat will require the constant supervision of a

capable man, and willing body of patient workers, and also as the ground on this farm is lighter than that now in use as a garden, we hope to develop a suitable section for early vegetables and small fruits.

New greenhouses are absolutely essential as the present are altogether inadequate for our requirements and are entirely beyond repair, and in fact collapsing, and it is sincerely hoped that adequate provision may be made therefor.

The present horse barn will have to be re-floored with cement and plank and as additional space is required for our young dairy stock, 'tis hoped that our request for a new horse barn may be granted, and then the present may be fitted up as a calf stable.

For the absolutely necessary repair of roads for which we from our own quarries can provide "metal" at a small cost, we will have to either borrow a Provincial 12-ton roller, or pay a considerable sum to the City of Hamilton for one of their splendid machines.

Exhibition.

Again it was our privilege to manage, together with Mr. Govan, the arrangements for our Hospital's display at the Canadian National Exhibition and we believe that the many expressed opinions that it was "the best yet" were not far from the truth. The increased space allotted and the actual display in working condition of the cabinets and baths added much to the pleasure of our many visitors and emphasized to them more fully the character of our Hospital treatment of patients.

Great interest was also shown in the excellent display of fruit, vegetables and grain from our several farms and gardens, and many of them forwarded a rotation of fresh vegetables and flowers for the full two weeks.

Sincerely thanking you for your always cheerfully given aid and advice, I am,

Your obedient servant,

W. M. English,

Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, HAMILTON, FOR THE YEAR ENDING OCTOBER 31st, 1917.

TABLE No. 1—HAMILTON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	656	639	1,295			
In Residence October 31st, 1916	.....	.....	.....	682	638	1,320
Admitted during year 1916-1917:						
By Warrant	102	44	146			
By Medical Certificate	75	95	170			
Voluntary	4	.....	4	181	139	320
Total number under treatment during year	.....	.....	.....	863	777	1,640
Discharges during year:—						
As recovered	24	24	48			
" improved	44	47	91			
" unimproved	3	3	6			
" not insane	1	.....	1			
Total number discharged during year	72	74	146			
Died	63	48	111			
Deported	3	.....	3			
Eloped	4	1	5			
Transferred	.....	3	3	.....	.....	.....
Remaining in Hospital October 31st, 1917.	142	126	268	721	651	1,372
Total number admitted since opening of Hospital	.....	.....	.....	3,704	3,530	7,234
Total number discharged	1,400	1,557	2,957			
" died	1,194	1,054	2,248			
" deported	53	8	61			
" eloped	125	10	135			
" transferred	211	250	461	2,983	2,879	5,862
Total remaining in Hospital October 31st, 1917	.....	.....	.....	721	651	1,372
Daily average population	689	641	1,330			
Collective day's stay of all patients in residence during year	250,974	233,841	484,815			
Number of applications on file	17	9	26			

TABLE No. 2—HAMILTON.

Showing Social State and Religion of patients admitted during the year and since opening of Hospital.

—	Admissions of year.			In residence.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	86	48	134	501	326	827	1,967	1,445	3,412
Married	89	85	174	197	288	485	1,718	2,066	3,784
Widowed	4	6	10	21	37	58	15	18	33
Divorced	.....	.....	.....	.....	.....	.....	2	1	3
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	2	.....	2	2	.....	2	2	.....	2
Total	181	139	320	721	651	1,372	3,704	3,530	7,234
RELIGION.									
Baptists	6	12	18	38	47	85	204	242	446
Congregationalists	.....	.....	.....	6	4	10	28	19	47
Episcopalian	34	32	66	119	111	230	689	637	1,326
Methodists	38	23	61	146	138	284	846	851	1,697
Presbyterians	20	25	45	113	103	216	677	668	1,345
Roman Catholics	42	22	64	149	117	266	672	623	1,295
Other Denominations	21	19	40	103	98	201	397	380	777
Unascertained	20	6	26	47	33	80	191	110	301
Totals	181	139	320	721	651	1,372	3,704	3,530	7,234

TABLE No. 3—HAMILTON.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	181	139	320	3,700	3,530	7,230
Total born in Canada	95	98	193	2,222	2,258	4,489
Armenia	1	.....	1	2	.....	2
Assyria	.....	.....	.....	1	.....	1
Austria	9	1	10	23	3	26
Australia	.....	.....	.....	1	.....	1
Belgium	.....	.....	.....	.....	.....	.....
Bulgaria	.....	.....	.....	1	.....	1
Central America	.....	.....	.....	.....	.....	.....
China	.....	.....	.....	3	.....	3
Denmark	.....	.....	.....	1	.....	1
England	26	25	51	558	403	961
France	1	.....	1	3	.....	3
Finland	.....	.....	.....	3	1	4
Galicia	1	.....	1	4	1	5
Germany	3	2	5	10	9	19
Greece	1	.....	1	10	12	22
Holland	.....	1	1	1	2	3
Hungary	1	1	2	5	4	9
Ireland	5	.....	5	299	407	706
Italy	3	.....	3	26	1	27
Japan	.....	.....	.....	.....	.....	.....
Macedonia	.....	.....	.....	.....	.....	.....
Other British Possessions	1	.....	1	96	89	185
Norway	.....	.....	.....	1	.....	1
Roumania	2	.....	2	5	.....	5
Russia	7	1	8	25	11	36
Scotland	6	7	13	220	192	412
South America	.....	.....	.....	2	1	3
Spain	.....	.....	.....	.....	.....	.....
Sweden	1	.....	1	6	.....	6
Turkey	1	.....	1	2	.....	2
United States	11	3	14	95	89	184
Poland	.....	.....	.....	8	2	10
Unascertained	6	.....	6	62	45	107
Totals	181	139	320	3,704	3,530	7,234

TABLE No. 4—HAMILTON.

Showing the Occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this Year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional :— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc	2	.....	2	67	2	69
Commercial :— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	19	6	25	224	39	263
Agricultural and Pastoral :— Farmers, Gardeners Stock Men, etc.	27	.....	27	1,013	3	1,016
Mechanics at Outdoor Vocations :— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	10	.....	10	306	2	308
Mechanics, etc., at Sedentary Vocations :— Shoemakers, Bookbinders Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	29	8	37	442	126	568
Domestic Service :— Waiters, Cooks, Servants, etc	7	16	23	24	632	656
Education and Higher Domestic Duties :— Governesses, Teachers, Students, Housekeepers, Nurses, etc	.....	108	108	87	2,248	2,335
Miners, Marine Engineers, Railway Employees, Seamen, etc	7	.....	7	51	.....	51
Laborers	54	.....	54	1,011	4	1,015
No Occupation	5	1	6	172	237	409
Unascertained	21	.....	21	307	237	544
Totals	181	139	320	3,704	3,530	7,234

TABLE No. 5—HAMILTON.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant Cases. Admitted during year.			Warrant Cases. Admitted since opening.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Quebec	....	....	....	1	.....	1	....	....	....	1	...	1	....	....	....
New Brunswick	....	....	....	1	.....	1	....	....	....	1	....	1	1	....	1
Algoma District	3	....	3	27	6	33	3	....	3	26	1	27	15	....	15
Brant	13	5	18	204	220	424	4	....	4	81	42	123	49	51	100
Bruce	....	1	1	8	22	30	....	1	1	6	9	15	1	4	5
Carleton	....	....	....	10	11	21	....	....	....	9	7	16	....	2	2
Dufferin	2	2	4	67	74	141	1	1	2	35	22	57	12	14	26
Dundas	....	....	....	2	3	5	....	....	....	2	1	3	....	....	....
Durham	....	....	....	10	17	27	....	....	....	8	7	15	....	1	1
Elgin	....	....	....	7	7	14	....	....	....	3	2	5	1	....	1
Essex	....	....	....	7	1	8	....	....	....	4	1	5	3	....	3
Frontenac	....	....	....	28	10	38	....	....	....	27	3	30	7	2	9
Glengarry	....	....	....	5	4	9	....	....	....	4	1	5	....	....	....
Grenville	....	....	....	4	3	7	....	....	....	4	2	6	....	....	....
Grey	8	8	16	254	198	452	2	4	6	145	72	217	68	43	111
Haldimand	3	4	7	147	142	289	1	1	2	66	24	90	24	28	52
Halton	1	5	6	117	122	239	....	....	....	47	26	73	20	20	40
Hastings	....	1	1	6	9	15	....	....	....	6	6	12	....	1	1
Huron	....	....	....	5	14	19	....	....	....	2	4	6	1	....	1
Kent	....	....	....	7	7	14	....	....	....	7	1	8	1	1	2
Kenora	....	....	....	1	.....	1	....	....	....	.....	.....	.....	....	....	....
Lambton	....	....	....	11	5	16	....	....	....	9	1	10	2	....	2
Lanark	....	1	1	1	4	5	....	....	....	1	1	2	....	....	....
Leeds	....	....	....	4	5	9	....	....	....	4	4	8	1	....	1
Lennox & Addingt'n	....	....	....	11	1	12	....	....	....	10	....	10	....	....	....
Lincoln	10	2	12	179	180	359	1	....	1	94	49	143	30	24	54
Manitoba	....	....	....	1	.....	1	....	....	....	1	....	1	....	....	....
Middlesex	....	....	....	22	14	36	....	....	....	11	8	19	4	....	4
Muskoka District	....	....	....	19	3	22	....	....	....	11	2	13	2	....	2
Nipissing District	....	....	....	13	12	25	....	....	....	7	7	14	3	6	9
Norfolk	3	9	12	138	145	283	3	1	4	20	10	30	25	31	56
Northumberland	....	....	....	27	17	44	....	....	....	15	8	23	2	....	2
Ontario	....	....	....	28	35	63	....	....	....	22	22	44	5	2	7
Oxford	2	....	2	23	19	42	....	....	....	14	10	24	5	1	6
Parry Sound Dist	....	....	....	7	6	13	....	....	....	7	3	10	2	2	4
Peel	....	....	....	22	28	50	....	....	....	7	9	16	3	5	8
Perth	....	....	....	10	12	22	....	....	....	8	7	15	4	3	7
Peterborough	....	....	....	11	19	30	....	....	....	11	11	22	1	....	1
Prescott	....	....	....	3	7	10	....	....	....	3	6	9	....	2	2
Prince Edward	....	....	....	5	2	7	....	....	....	3	2	5	....	....	....
Rainy River Dist	....	....	....	6	1	7	....	....	....	6	1	7	1	1	2
Renfrew	....	....	....	5	2	7	....	....	....	4	....	4	....	....	....
Russell	....	....	....	.....	1	1	....	....	....	.....	1	1	....	1	1
Simcoe	....	1	1	221	167	388	....	....	....	152	82	234	11	9	20
Stormont	....	....	....	6	3	9	....	....	....	5	1	6	1	....	1
Sudbury	....	....	....	5	.....	5	....	....	....	5	....	5	3	....	3
Thunder Bay Dist	....	2	2	16	13	29	....	2	2	11	11	22	1	7	8
Victoria	....	1	1	14	23	37	....	....	....	12	18	30	2	1	3
Waterloo	8	15	23	226	244	470	2	4	6	113	47	160	65	66	131
Welland	12	13	25	202	227	429	1	2	3	81	40	121	41	43	84
Wellington	49	10	59	347	322	669	37	....	37	148	44	192	96	69	165
Wentworth	60	55	115	963	912	1,875	42	28	70	373	173	546	178	182	360
York	4	3	7	223	227	450	2	....	2	180	162	342	19	27	46
Unascertained	....	....	....	7	2	9	....	....	....	2	1	3	5	1	6
Temiskaming	3	1	4	9	1	10	3	....	3	9	....	9	6	1	7
Saskatchewan	....	....	....	1	1	2	....	....	....	.....	.....	.....	....	....	....
Totals	181	139	320	3,704	3,530	7,234	102	44	146	1,843	972	2,815	721	651	1372

TABLE No. 6—HAMILTON.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	3	9	12	1	3	4	8
Mental Strain, Worry and Overwork (not included in above)	28	23	51	7	16	23	28
Religious Excitement	.....	3	3	.....	1	1	2
Love Affairs, including seduction	2	2	4	.....	1	1	3
Fright and Nervous Shock	4	4	8	2	2	4	4
PHYSICAL.							
Alcoholism	5	1	6	1	2	3	3
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	.....	.....	.....	.....	.....	.....	.....
Masturbation	.....	3	3	.....	.....	.....	3
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	3	1	4	1	.....	1	3
Pregnancy	.....	13	13	.....	6	6	7
Parturition and Puerperium	.....	2	2	.....	.....	.....	2
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	5	5	.....	3	3	2
Fevers	.....	.....	.....	.....	.....	.....	.....
Privations and Overwork	5	8	13	3	4	7	6
Epilepsy	6	3	9	1	3	4	5
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	10	9	19	5	4	9	10
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	4	1	5	.....	.....	.....	5
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-Infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	14	7	21	1	5	6	15
HEREDITARY.							
Congenital Defect	5	2	7	1	3	4	3
Unascertained	92	43	135	24	10	34	101
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	181	139	320	47	63	110	210

TABLE No. 7—HAMILTON.

Showing hereditary tendency to insanity in patients admitted during the year and since the opening of the Hospital.

	Admitted During Year			Since Opening		
	Male	Female	Total	Male	Female	Total
Paternal Branch	11	17	28	111	84	195
Maternal Branch	7	21	28	90	101	191
Paternal and Maternal Branches	1	5	6	23	37	60
Collateral Branches	3	8	11	110	123	233
No Hereditary Tendency	86	68	154	450	389	839
Unascertained	73	20	93	447	271	718
Totals	181	139	320	1,231	1,005	2,236

TABLE No. 8—HAMILTON.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Discharge	73	108	181
Discharged, Recovered	11	16	27
" Improved	29	36	65
" Unimproved	2	1	3
Died			
Returned to Hospital	9	20	29
Absent on Probation on October 31st, 1917	22	35	57

TABLE No. 9—HAMILTON.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total	Male.	Female.	Total.
Specific Infectious Diseases :—						
Typhoid Fever	.....	.....	.....	7	1	8
Influenza	.....	.....	.....	2	3	5
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	.....	.....	13	10	23
Septicæmia	.....	2	2	14	9	23
Dysentery	.....	2	2	17	25	42
Syphilis	.....	.....	.....	.....	.....	.....
Tuberculosis	6	7	13	169	189	358
Jaundice	.....	.....	.....	1	.....	1
Constitutional Diseases :—						
Rheumatism	.....	.....	.....	.....	1	1
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	4	1	5
Diseases of the Digestive System :—						
Mouth, salivary glands	.....	.....	.....	1	.....	1
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	.....	.....	.....	.....	.....
Enteritis	.....	.....	.....	6	13	19
Diseases of the Intestines :—Colitis	.....	.....	.....	.....	1	1
Diseases of the Liver	2	.....	2	7	10	17
" " Pancreas	.....	.....	.....	.....	1	1
" " Peritoneum	.....	.....	.....	12	18	20
Intestinal Obstruction	.....	.....	.....	8	3	11
Diseases of the Respiratory System :—						
Diseases of the Nose and Larynx	.....	.....	.....	1	.....	1
" " Bronchi	.....	.....	.....	3	2	5
" " Lungs	2	2	4	29	50	129
" " Pleura	.....	.....	.....	2	2	4
Diseases of the Circulatory System :						
Diseases of the Pericardium	.....	.....	.....	.....	.....	.....
" " Heart	5	1	6	85	63	148
Arterio-sclerosis	1	.....	1	18	7	25
Aneurism	.....	1	1	2	2	4
Diseases of the Blood and Ductless Glands :—						
Anæmia	1	.....	1	3	5	8
Pernicious Anæmia	.....	.....	.....	10	14	24
Leukæmia	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....
Purpura Hæmorrhage	.....	.....	.....	3	3	6
Diseases of the Genito-Urinary System	2	.....	2	30	16	46
Carried Forward	19	15	34	497	439	936

TABLE No. 9—HAMILTON—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	19	15	34	497	439	936
Diseases of the Nervous System :—						
Diseases of the Nerves	.....	.....	.....	.....	3	3
" " Spinal Cord	.....	.....	.....	.....	.....	.....
" " Meninges	.....	.....	.....	2	6	8
Organic Diseases of the Brain— (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage, and other gross lesions)	5	2	7	69	69	138
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	3	1	4	5	9	14
Epilepsy	9	8	17	103	68	171
Mental Diseases :—						
Exhaustion of Acute Mental Disease	8	5	13	67	137	204
Exhaustion of Chronic Mental Disease	6	6	12	84	105	189
General Paresis	3	.....	3	162	18	180
Intoxications :—						
Alcoholism	.....	.....	.....	3	.....	3
Morphinism	.....	.....	.....	.....	.....	.....
Metallic Poisoning	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	.....	.....
Debility of Old Age	10	11	21	153	139	292
Accident	.....	.....	.....	15	2	17
Suicide	.....	.....	.....	10	16	26
Surgical Diseases	.....	.....	.....	12	12	24
Gynæcological Diseases	.....	.....	.....	.....	2	2
Malignant New Growths, or Cancer	.....	.....	.....	12	29	41
Totals	63	48	111	1,194	1,054	2,248

TABLE No. 10—HAMILTON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Diseases.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	.....	....	....	....	....	....	....
(b) Infection Delirium	....	....	.....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	4	4	....	1	1	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	1	3	4	....	5	5	....	....	....
(b) Acute Confusional Psychoses	1	4	5	1	3	4	....	2	2
(c) Neurasthenia	2	....	2	2	....	2	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxication	1	1	2	....	1	1	....	....	....
(b) Chronic "	....	....	.....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	8	1	9	8	1	9	1	....	1
(b) Delirium Tremens	....	....	.....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	.....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	.....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	.....	....	....	....	....	....	....
(f) " Paranoia	....	....	.....	....	....	....	....	....	....
(g) " Paresis	....	....	.....	....	....	....	....	....	....
(h) Morphinism	2	1	3	....	1	1	....	....	....
(i) Cocainism	....	....	.....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	.....	....	....	....	....	....	....
(b) Cretinism	....	....	.....	....	....	....	....	....	....
Dementia Præcox:									
(a) Hebaphrenic	7	6	13	1	6	7	2	....	2
(b) Catatonic	51	49	100	18	27	45	8	13	21
(c) Paranoid	32	13	45	9	3	12	2	....	2
General Paresis	11	2	13	2	....	2	6	....	6
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	2	....	2	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	.....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	.....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	.....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	11	2	13	2	....	2	4	....	4
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	.....	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	1	12	13	4	5	9	2	2	4
(b) Pre-senile Delusional Psychoses	1	....	1	....	....	....	....	....	....
(c) Senile Dementia	21	12	33	2	3	5	12	12	24
Manic Depressive Psychoses:—									
(a) Manic States	6	11	17	1	2	3	14	6	20
(b) Depressed States	3	6	9	11	13	24	....	....	....
(c) Mixed States	....	....	.....	....	....	....	....	....	....
Carried Forward	161	127	288	61	71	132	51	35	86

TABLE No. 10—HAMILTON—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Diseases.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	161	127	288	61	71	132	51	35	86
Paranoia	....	....	....	....	....	....	....	....	....
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	9	4	13	4	....	4	8	10	18
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	1	....	1	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	8	5	13	6	3	9	2	3	5
(b) Idiocy	....	1	1	....	....	....	1	....	1
Traumatism	1	....	1	....	....	....	1	....	1
Not Diagnosed	1	2	3	....	....	....	1	....	1
Not Insane	....	....	....	1	....	1	....	....	....
Totals	181	139	320	72	74	146	63	48	111

TABLE No. 11—HAMILTON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1918.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	48	98	....	....	1	10
From 1 to 2 months	33	50	1	....	1	13
" 2 " 3 "	19	47	....	....	....	3
" 3 " 4 "	16	21	1*	....	2	3
" 4 " 5 "	6	10	8	4	....	2
" 5 " 6 "	8	6	5	11	....	2
" 6 " 9 "	19	4	10	26	....	6
" 9 " 12 "	8	6	4	7	1	2
" 12 " 18 "	25	30	10	23	1	6
" 18 months to 2 years	5	52	....	....	....	9
" 2 to 3 years	26	107	3	3	....	10
" 3 " 4 "	16	73	2	3	....	5
" 4 " 5 "	10	90	2	1	....	1
" 5 " 10 "	57	303	2	11	....	10
" 10 " 15 "	12	146	1	1	....	3
" 15 " 20 "	5	119	....	1	....	8
" 20 years and upwards	7	210	....	....	....	18
Totals	320	1,372	49	91	6	111

* Discharged not insane.

ROCKWOOD HOSPITAL FOR INSANE, KINGSTON.

To W. W. Dunlop, Esq.,

Inspector of Prisons and Public Charities.

Dear Sir,—I have the honour to submit herewith the annual report of the Hospital for the year ending October 31st, 1917.

The admissions for the year numbered one hundred and fifty-six, an increase of twenty over the previous year.

We were in the fortunate position of being able to admit all cases suitable for hospital treatment, for whom application was made.

The discharges were ninety-five and the deaths forty-one.

The increase in population over last year is fourteen, and when one considers the strain of war conditions the small increase is somewhat surprising; we had anticipated a much larger one.

The work of altering the windows in the front of the main building was completed early in the year. The change has greatly improved the appearance of the building from the outside and has also made a most beneficial change in the appearance and conditions in the wards, improving the light and ventilation, making the wards most bright and cheerful generally. In all seventy-two windows were altered, and the results have more than compensated for the labour involved.

New concrete floors were laid in the two coal vaults, a new roof put on the Industrial Building, and eighteen hundred feet of sewer pipe laid from the houses at the main gate to connect with the sewage disposal plant, thus enabling us to remove the unsightly outbuildings at these cottages, which so disfigured the entrance to the grounds.

Staff Changes.

In January, Dr. Wright resigned to assume the position of Superintendent of the Kingston General Hospital, and Miss Scott, Head Nurse, left to take up Post Graduate work in New York. In September, Dr. Preston resigned to enter the military service. Mr. E. H. Peterson was appointed Clinic in May, and has been of the greatest assistance, doing most excellent work. Miss Louise Dwyer assumed the duties of Head Nurse in June, and has filled the position in a most efficient manner.

It has been a trying year upon our attendant and nursing staffs owing to our being short handed, and I feel grateful for the manner in which everyone has assumed the increased burden placed upon them.

I also thank you, sir, for your kindly consideration and advice at all times.

I have the honour to be, Sir,

Your obedient servant,

W. K. Ross,

Acting Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, KINGSTON, FOR THE YEAR ENDING OCTOBER 31ST, 1917.

TABLE No. 1—KINGSTON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	311	268	579			
In Residence, October 31st, 1916	.....	.....	.....	304	262	566
Admitted during year 1916-1917 :						
By Warrant	17	4	21			
By Medical Certificate	76	59	135	93	63	156
Total number under treatment during year	.....	.....	.....	397	325	722
Discharges during year:—						
As recovered	45	30	75			
" improved	8	8	16			
" unimproved	3	.....	3			
" not insane	1	.....	1			
Total number discharged during year.	57	38	95			
Died	19	22	41			
Deported	.....	.....	.....			
Eloped	4	.....	4			
Transferred	.....	2	2	80	62	142
Remaining in Hospital, October 31st, 1917	.....	.....	.....	317	263	580
Total number admitted since opening of Hospital	.....	.....	.....	2,980	2,516	5,496
Total number discharged since opening of Hospital	1,383	1,209	2,592			
Total number died since opening of Hospital	928	736	1,664			
Total number deported since opening of Hospital	10	4	14			
Total number eloped since opening of Hospital	97	1	98			
Total number transferred since opening of Hospital	245	303	548	2,663	2,253	4,916
Total remaining in Hospital October 31st, 1917	.....	.....	.....	317	263	580
Daily average population	311	259	570			
Collective days' stay of all patients in residence during year	113,548	94,715	208,263			
Number of applications on file	3	2	5			

TABLE No. 2—KINGSTON.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

	Admissions of Year.			In residence.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	53	22	75	234	134	368	1,727	1,095	2,822
Married	33	28	61	82	108	190	1,191	1,343	2,534
Widowed	6	13	19	.....	20	20	53	71	124
Divorced	.....	.....	.....	.....	.....	.....	1	1	2
Separated	1	.....	1	1	1	2	8	6	14
Unascertained	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	93	63	156	317	263	580	2,980	2,516	5,496
RELIGION.									
Baptists	2	.....	2	5	4	9	52	44	96
Congregationalists	.....	1	1	1	1	2	11	9	20
Episcopalians	15	10	25	49	50	99	569	484	1,053
Methodists	25	29	54	87	92	179	691	667	1,358
Presbyterians	15	8	23	37	34	71	443	398	841
Roman Catholics	27	12	39	89	66	155	907	760	1,667
Other Denominations	3	2	5	31	13	44	200	114	314
Unascertained	6	1	7	18	3	21	107	40	147
Totals	93	63	156	317	263	580	2,980	2,516	5,496

TABLE No. 3—KINGSTON.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	93	63	156	2,980	2,516	5,496
Total born in Canada	78	53	131	2,084	1,805	3,889
Armenia						
Assyria				2		2
Austria				4		4
Australia						
Belgium						
Bulgaria						
Central America						
China						
Denmark						
England	7	3	10	233	155	388
France				3	1	4
Finland				1	2	3
Galicia					1	1
Germany				49	20	69
Greece						
Holland						
Hungary	1		1	2		2
Ireland	2	3	5	340	313	653
Italy				4		4
Japan				1		1
Macedonia						
Other British Possessions				6	4	10
Norway						
Roumania						
Russia	2	1	3	19	3	22
Scotland	1		1	99	95	194
South America				6		6
Spain						
Sweden				3		3
Turkey						
United States	1	3	4	38	36	74
West Indies				1	1	2
Unascertained	1		1	79	72	151
Other				6	8	14
Totals	93	63	156	2,980	2,516	5,496

TABLE No. 4—KINGSTON.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional :— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	19	.....	19	117	2	119
Commercial :— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	8	1	9	227	7	234
Agricultural and Pastoral :— Farmers, Gardeners, Stockmen, etc.	37	.....	37	905	4	909
Mechanics at Outdoor Vocations :— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	7	.....	7	284	.....	284
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	2	2	4	199	146	345
Domestic Service :— Waiters, Cooks, Servants, etc.	.....	1	1	27	497	524
Education and Higher Domestic Duties :— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	.....	48	48	37	1,376	1,413
Miners, Marine Engineers, Railway Employees, Seamen, etc.	1	.....	1	72	.....	72
Laborers :—	16	.....	16	805	.....	805
No Occupation :—	3	11	14	121	221	342
Unascertained :—	.....	.....	.....	186	263	449
Other :—	.....	.....	.....	.....	.....	.....
Totals	93	63	156	2,980	2,516	5,496

TABLE No. 5—KINGSTON.

Showing the Counties and Districts from which patients have been admitted during the year and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant Cases.						Remaining in residence.		
							Admitted during year			Admitted since opening.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	....	....	....	4	2	6	....	....	....	3	2	5	...	..	...
Brant	....	....	....	6	7	13	....	....	....	6	7	13	...	..	...
Bruce	....	....	....	3	6	9	....	....	....	3	5	8	...	..	...
Carleton	1	....	1	208	164	372	....	....	....	166	125	291	2	13	34
Dufferin	....	....	....	.....	.....	.....	....	....	....	....	....	....	...	...	...
Dundas	....	....	....	37	33	70	....	....	....	.....	....	.....	...	..	2
Durham	3	4	7	63	61	124	2	1	3	18	8	26	...	8	11
Elgin	....	....	....	3	4	7	....	....	....	3	4	7	...	..	...
Essex	....	....	....	3	2	5	....	....	....	3	2	5	...	..	...
Frontenac	18	18	36	602	554	1,156	....	....	....	172	106	278	51	68	119
Glengarry	....	1	1	56	54	110	....	....	....	.....	....	.....	...	6	9
Grenville	....	....	....	58	52	110	....	....	....	.....	....	.....	1	1	2
Grey	....	....	....	8	10	18	....	....	....	7	9	16	...	1	1
Haldimand	....	....	....	6	7	13	....	....	....	6	6	12	...	...	...
Haliburton	....	....	....	2	2	4	....	....	....	2	....	2	1	1	2
Halton	....	....	....	3	2	5	....	....	....	2	1	3	...	...	...
Hastings	13	7	20	331	275	606	1	....	1	136	68	204	48	40	88
Huron	....	....	....	6	5	11	....	....	....	6	5	11	...	...	...
Kent	....	....	....	4	1	5	....	....	....	4	....	4	...	...	...
Lambton	....	....	....	12	3	15	....	....	....	12	2	14	...	1	1
Lanark	....	....	....	126	127	253	....	....	....	97	87	184	6	5	11
Leeds	....	....	....	96	84	180	....	....	....	79	57	136	6	2	8
Lennox&Addington	7	11	18	214	198	412	1	2	3	97	49	146	21	24	45
Lincoln	....	....	....	9	7	16	....	....	....	9	5	14	...	...	...
Middlesex	....	....	....	9	6	15	....	....	....	6	4	10	1	...	1
Muskoka District	....	....	....	1	1	2	....	....	....	.....	1	1	...	...	...
Nipissing District	....	1	1	1	3	4	....	....	....	.....	1	1	1	1	2
Norfolk	....	....	....	7	5	12	....	....	....	7	5	12	1	...	1
Northumberland	5	8	13	162	198	360	2	....	2	99	66	165	39	33	72
Ontario	....	1	1	21	25	46	....	1	1	19	24	43	1	2	3
Oxford	....	....	....	14	4	18	....	....	....	14	3	17	...	...	...
Parry Sound Dist.	....	....	....	.....	.....	.....	....	....	....	.....	.....	.....	...	...	...
Peel	....	....	....	4	1	5	....	....	....	4	1	5	...	...	...
Perth	....	....	....	10	10	20	....	....	....	10	9	19	...	...	...
Peterborough	3	4	7	24	29	53	2	....	2	10	9	19	6	3	9
Prescott	....	....	....	48	30	78	....	....	....	41	24	65	1	2	3
Prince Edward	5	....	5	126	92	218	2	....	2	39	17	56	23	10	33
Rainy River Dist.	....	....	....	1	.....	1	....	....	....	1	....	1	...	...	...
Renfrew	10	7	17	237	221	458	....	....	....	59	22	81	41	32	73
Russell	....	....	....	.....	2	2	....	....	....	.....	.....	.....	...	1	1
Simcoe	....	....	....	14	12	26	....	....	....	13	11	24	...	...	...
Stormont	....	....	....	55	48	103	....	....	....	111	73	184	2	2	4
Thunder Bay Dist.	....	....	....	1	.....	1	....	....	....	.....	.....	.....	1	...	1
Victoria	5	....	5	15	13	28	5	....	5	15	12	27	6	...	6
Waterloo	1	....	1	15	4	19	....	....	....	12	4	16	...	...	...
Welland	....	....	....	8	5	13	....	....	....	8	5	13	1	1	2
Wellington	....	....	....	6	4	10	....	....	....	4	4	8	...	...	...
Wentworth	....	....	....	18	21	39	....	....	....	14	13	27	1	3	4
York	....	....	....	56	69	125	....	....	....	39	50	89	9	3	12
Unascertained	4	....	4	212	50	262	2	....	2	32	7	39	6	...	6
Other	....	....	....	8	2	10	....	....	....	1	....	1	...	...	...
Military	17	1	18	28	1	29	....	....	....	.....	....	.....	10	...	10
Interned Aliens	1	....	1	19	.....	19	....	....	....	.....	....	.....	4	...	4
Totals	93	63	136	2,980	2,516	5,496	17	4	21	1,389	913	2,302	317	263	580

TABLE No. 6—KINGSTON.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse conditions (such as loss of friends, business troubles, etc.)	8	15	23	.....	.....	.....	.....
Mental Strain, Worry and Overwork (not included in above)	17	5	22	.....	.....	.....	.....
Religious Excitement	.....	.....	.....	.....	.....	.....	.....
Love Affairs, including seduction	.....	.....	.....	.....	.....	.....	.....
Fright and Nervous Shock	.....	.....	.....	.....	.....	.....	.....
PHYSICAL.							
Alcoholism	3	1	4	.....	.....	.....	.....
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	2	.....	2	.....	.....	.....	.....
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	.....	.....	.....	.....	.....	.....	.....
Pregnancy	.....	1	1	.....	.....	.....	.....
Parturition and Puerperium	.....	3	3	.....	.....	.....	.....
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	2	2	.....	.....	.....	.....
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	3	.....	3	.....	.....	.....	.....
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	1	1	.....	.....	.....	.....
Senility	13	10	23	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	4	2	6	.....	.....	.....	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	1	.....	1	.....	.....	.....	.....
Other Auto-infection	1	2	3	.....	.....	.....	.....
Other Bodily Diseases	2	3	5	.....	.....	.....	.....
HEREDITARY	.....	.....	.....	.....	.....	.....	.....
Congenital Defect	22	6	28	.....	.....	.....	.....
Unascertained	16	12	28	93	63	156	.....
Not Insane	1	.....	1	.....	.....	.....	.....
Totals	93	63	156	93	63	156	.....

TABLE No. 7—KINGSTON.

Showing hereditary tendency to insanity in patients admitted during the year and since the opening of the Hospital.

—	Admitted during year.			Since 1908.		
	Male.	Female.	Total.	Male.	Female.	Total.
Paternal Branch	14	4	18	120	102	222
Maternal Branch	10	10	20	74	88	162
Paternal and Maternal Branches	1	.....	1	14	11	25
Collateral Branches	12	4	16	62	56	118
No Hereditary Tendency	.....	.....	.....	58	37	95
Unascertained	56	45	101	418	289	707
Not Insane	.....	.....	.....	8	.....	8
Totals	93	63	156	754	583	1,337

TABLE No. 8—KINGSTON.

Showing summary of Probational discharges during the year.

—	Male.	Female.	Total.
Number granted discharge	37	27	64
Discharged, Recovered	18	18	36
" Improved	6	3	9
" Unimproved	.....	.....	.....
Died	.....	.....	.....
Returned to Hospital	9	4	13
Absent on Probation on Oct. 31st, 1917	4	2	6
	37	27	64

TABLE No. 9—KINGSTON.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since 1908.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	1	2	3
Influenza	.....	.....	.....	.....	.....	.....
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	.....	.....	.....	1	1
Septicæmia	.....	.....	.....	3	1	4
Dysentery	.....	.....	.....	.....	1	1
Syphilis	.....	.....	.....	2	.....	2
Tuberculosis	5	8	13	41	43	84
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	.....	.....	.....
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	.....	1	1
Diseases of Digestive System:—						
Mouth, salivary glands	.....	.....	.....	.....	.....	.....
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	.....	.....	.....	.....	.....
Stomach	.....	.....	.....	.....	1	1
Diseases of the Intestines	.....	.....	.....	6	8	14
Diseases of the Liver	1	.....	1	2	2	4
" Pancreas	.....	.....	.....	1	.....	1
" Peritoneum	1	.....	1	5	.....	5
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....
" Bronchi	.....	.....	.....	6	3	9
" Lungs	3	3	6	30	36	66
" Pleura	.....	.....	.....	.....	.....	.....
Diseases of the Circulatory System:—						
Diseases of the Pericardium	.....	.....	.....	.....	1	1
" Heart	1	4	5	25	20	45
Arterio-sclerosis	.....	.....	.....	14	4	18
Aneurism	.....	.....	.....	1	.....	1
Diseases of the Blood and Ductless Glands:						
Anæmia	.....	.....	.....	.....	.....	.....
Pernicious Anæmia	.....	.....	.....	.....	2	2
Leukæmia	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....
Adrenal Glands	.....	.....	.....	.....	1	1
Diseases of the Genito-Urinary System:—	.....	.....	.....	3	5	8
Carried forward	11	15	26	140	132	272

TABLE No. 9—KINGSTON—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	11	15	26	140	132	272
Diseases of the Nervous System :—						
Diseases of the Nerves.....	.....	.....	.....	.....	.....	.....
" Spinal Cord	.....	.....	.....	1	.....	1
" Meninges	.....	.....	.....	.....	.....	.....
Organic Diseases of the Brain. (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions).....	1	.....	1	15	13	28
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	.....	.....	.....	.....	.....	.....
Epilepsy.....	3	2	5	7	5	12
Mental Diseases :—						
Exhaustion of Acute Mental Disease.	1	1	2	9	5	14
" Chronic "	.....	.....	.....	6	5	11
General Paresis.....	.....	.....	.....	26	2	28
Intoxications :—						
Alcoholism	.....	.....	.....	.....	.....	.....
Morphinism.....	.....	.....	.....	1	.....	1
Metallic Poisoning	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	.....	.....
Debility of Old Age	2	3	5	11	8	19
Accident.....	.....	.....	.....	3	2	5
Suicide	.....	.....	.....	4	1	5
Surgical Diseases	1	.....	1	1	1	2
Gynæcological Diseases	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer.....	.....	1	1	3	17	20
Died while on Probation, cause unknown.	.....	.....	.....	.....	1	1
Totals.....	19	22	41	227	192	419

TABLE No. 10—KINGSTON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	....	....	....	....	....	....	....
(b) Infection Delirium	....	....	....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	....	....	1	1	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	3	8	11	3	6	9	....	1	1
(c) Neurasthenia	....	....	....	....	....	....	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	1	....	1	1	....	1	....	....	....
(b) Chronic "	....	....	....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	5	1	6	5	....	5	....	....	....
(b) Delirium Tremens	....	....	....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	....	....	....	....	....	....	....
(f) " Paranoia	....	....	....	....	....	....	....	....	....
(g) " Paresis	....	....	....	....	....	....	....	....	....
(h) " Morphinism	4	1	5	4	1	5	....	....	....
(i) " Cocainism	....	....	....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	....	....	....	....	....	....	....
(b) Cretinism	....	....	....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	14	6	20	7	3	10	....	1	1
(b) Catatonic	5	1	6	7	4	11	....	1	1
(c) Paranoid	13	7	20	10	3	13	....	1	1
General Paresis	2	1	3	1	....	1	1	....	1
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	....	....	....	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	....	....	....	....	....	....	....
(d) Cerebral Syphilis	1	....	1	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	2	2	....	1	1	1	....	1
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	....	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	6	9	15	2	2	4	....	2	2
(b) Pre-senile Delusional Psychoses	6	5	11	....	1	1	1	1	2
(c) Senile Dementia	10	6	16	2	....	2	4	5	9
Manic Depressive Psychoses:—									
(a) Manic States	7	4	11	4	5	9	6	5	11
(b) Depressed States	5	5	10	4	5	9	....	2	2
(c) Mixed States	....	....	....	....	1	1	1	....	1
Paranoia	....	....	....	1	....	1	1	....	1
Carried forward	82	56	138	51	33	84	15	19	34

TABLE No. 10—KINGSTON—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	82	56	138	51	33	84	15	19	34
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	5	....	5	1	....	1	3	3	6
(b) Hysterical Psychoses	....	2	2	....	2	2	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	4	4	8	3	3	6	1	....	1
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	2	1	3	1	....	1	....	....	....
Not Insane	....	....	....	1	....	1	....	....	....
Totals	93	63	156	57	38	95	19	22	41

TABLE No. 11—KINGSTON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on 31st October, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	29	12	5	1	.....	5
From 1 to 2 months	7	7	11	1	.....	2
" 2 " 3 "	4	10	8	.....	1	.....
" 3 " 4 "	4	13	7	2	1	2
" 4 " 5 "	2	8	9	.....	.....	2
" 5 " 6 "	2	3	11	1	1	.....
" 6 " 9 "	8	22	8	2	.....	2
" 9 " 12 "	4	13	6	3	.....	1
" 12 " 18 "	8	22	3	1	.....	1
" 18 months to 2 years	2	19	1	2	.....	4
" 2 to 3 years	8	35	5	1	.....	3
" 3 " 4 "	3	36	1	.....	.....	2
" 4 " 5 "	2	26	.....	.....	.....	.....
" 5 " 10 "	8	80	.....	2	.....	3
" 10 " 15 "	4	62	.....	.....	.....	1
" 15 " 20 "	1	61	.....	.....	.....	1
" 20 years and upwards	.....	151	.....	.....	.....	12
Unknown	60	.....	.....	.....	.....	.....
Totals	156	580	75	16	3	41

HOSPITAL FOR INSANE, LONDON.

November 1st, 1917.

To W. W. Dunlop, Esq.,

Inspector of Prisons and Public Charities.

Sir,—I beg to present the forty-seventh annual report of the Hospital for Insane, London, for the year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	511	555	1,066			
In Residence, October 31st, 1916	.....	.....	.....	564	607	1,171
Admitted during year 1917—						
By Warrant	28	11	39			
By Medical Certificate	89	112	201	117	123	240
Total under treatment during year	.....	.....	.....	681	730	1,411
Discharges during year—						
As recovered	39	34	73			
As improved	19	31	50			
As unimproved	.....	3	3			
As not insane	.....	.....	.....			
Total number discharged during year	58	68	126			
Died	38	51	89			
Deported	.....	.....	.....			
Eloped	2	.....	2			
Transferred	1	.....	1	99	119	218
Remaining in Hospital October 31st, 1917	.....	.....	.....	582	611	1,193
Total admitted since opening of Hospital	.....	.....	.....	4,118	3,805	7,923
" discharged " " " "	1,777	1,744	3,521			
" died " " " "	1,355	1,186	2,541			
" deported " " " "	15	4	19			
" eloped " " " "	142	16	158			
" transferred " " " "	247	244	491	3,536	3,194	6,730
Total remaining in Hospital October 31st, 1917	.....	.....	.....	582	611	1,193
Daily average population	554	616	1,170			
Collective day's stay of all patients in residence during year	202,274	224,725	426,999			
Number of applications on file	6	12	18			

You will see from the above table that there has been an increase under every heading:—

The total number under treatment increased..40
" " of admissions increased.....22
" " of discharges increased..... 8
" " of deaths increased 13
" population during the year increased..22

There does not appear to be any grounds for hoping that the number of insane in this district will decrease. The history of our Institution for almost fifty years, has shown a steady annual increase in population.

Fire.

On the twenty-first day of June last, we were visited by what, at one time, threatened to be a most disastrous fire. About four o'clock in the morning, fire was discovered in the attic of the central part of the Main Building. When first seen, it was already breaking through the ceiling of a dormitory where fifty female patients were sleeping. Fortunately, some of the patients were awakened, saw the fire and alarmed the nurses. The patients were removed to places of safety without the slightest confusion, thus showing the benefit of regular fire drills. Although the fire had made considerable headway before it was discovered, owing to the splendid efforts of our own fire brigade and of the city fire brigade, which arrived on the scene very promptly, the damage was largely confined to the attic and roof. All the damaged portion will shortly be repaired and will be in a much better condition than it was before.

Wassermann Test.

Desiring to determine accurately the percentage of syphilis amongst those admitted to this Hospital, we have made a Wassermann Test of the blood serum of every patient admitted to this Institution. Thus far, one hundred and twenty-six have been examined. Of these, eighteen were positive and one hundred and eight were negative.

Twenty patients had their cerebro-spinal fluid examined by the Wassermann Test. Of these, ten were positive and ten were negative.

It is our custom to make an examination of the cerebro-spinal fluid of all patients presenting a positive blood Wassermann, as well as upon those presenting neurological symptoms suggesting luetic involvement.

Of the eighteen cases presenting a positive blood Wassermann, ten of the cerebro-spinal fluids were positive and eight were negative.

Of the ten positive, seven were clinically cases of general paresis, two were cases of cerebro-spinal lues and one was a case of manic depressive type.

Of the eight positive blood Wassermanns with cerebro-spinal fluid negative, there were two imbeciles, two cases of paranoid dementia præcox, one case of catatonic dementia præcox, two cases of manic depressive insanity and one case not diagnosed. In addition to these, two cases which presented a negative blood Wassermann had their cerebro-spinal fluid examined because of suspicious symptoms. One of these presented some of the symptoms of and a rather characteristic history of tabes dorsalis. The cerebro-spinal fluid was negative. The other case was clinically a case of multiple sclerosis and the cerebro-spinal fluid was also negative.

Staff.

There have been a great many changes in the staff of our attendants and nurses during the past year, but on the whole, we have been able to keep together a very good staff.

Dr. C. C. Whittaker, a graduate of the Western University, joined our medical staff in the latter part of 1916. Our medical staff is still short and it is with considerable difficulty that we are enabled to keep up with the work which presents itself.

Amusements.

The moving pictures which have lately been introduced are proving themselves to be a source of very great entertainment to our patients. On the whole, they appear to be the most popular form of amusement.

Church Services.

I must again tender my sincere thanks to the various ministers of the City of London who, often at great inconvenience to themselves, conduct the services in our little chapel each Sunday morning. Our thanks are also due to the priests of St. Patrick's Parish, who look after the spiritual welfare of the Roman Catholic patients.

I have the honour to be,

Your obedient servant,

W. J. Robinson,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, LONDON, FOR THE YEAR ENDING OCTOBER 31ST, 1917.

TABLE No. 1—LONDON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	511	555	1,066			
In residence, October 31st, 1916	.....	.....	.....	564	607	1,171
Admitted during year 1916-17:						
By Warrant	28	11	39			
By Medical Certificate	89	112	201	117	123	240
Total number under treatment during year	.....	.....	.....	681	730	1,411
Discharges during year:						
As recovered	39	34	73			
" improved	19	31	50			
" unimproved	.....	3	3			
" not insane	.....	.....	.....			
Total number discharged during year	58	68	126			
Died	38	51	89			
Deported	.....	.....	.....			
Eloped	2	.....	2			
Transferred	1	.....	1	99	119	218
Remaining in Hospital, October 31st, 1917	.....	.....	.....	582	611	1,193
Total number admitted since opening of Hospital	.....	.....	.....	4,118	3,805	7,923
Total number discharged since opening of Hospital	1,777	1,744	3,521			
Total number died since opening of Hospital	1,355	1,186	2,541			
Total number deported since opening of Hospital	15	4	19			
Total number eloped since opening of Hospital	142	16	158			
Total number transferred since opening of Hospital	247	244	491	3,536	3,194	6,730
Total remaining in Hospital, October 31st, 1917	.....	.....	.....	582	611	1,193
Daily average population	554	616	1,170			
Collective day's stay of all patients in residence during year	202,274	224,725	426,999			
Number of applications on file	6	12	18			

TABLE No. 2—LONDON.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

	In residence.			Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	425	320	745	64	50	114	2,304	1,474	3,778
Married	142	238	380	49	59	108	1,765	2,246	4,011
Widowed	11	50	61	1	14	15	43	84	127
Divorced	2	.....	2	2	.....	2	3	1	4
Separated	.....	.....	.....	1	.....	1	3	.....	3
Unascertained	2	3	5	.....	.....	.....	.....	.....	.....
Totals	582	611	1,193	117	123	240	4,118	3,805	7,923
RELIGION.									
Baptists	46	41	87	9	12	21	284	301	585
Congregationalists	4	3	7	.....	.....	.....	32	29	61
Episcopalians	97	93	190	27	17	44	740	647	1,387
Methodists	131	169	300	25	35	60	980	1,042	2,022
Presbyterians	117	145	262	18	30	48	902	825	1,727
Roman Catholics	101	105	206	23	11	34	668	620	1,288
Other Denominations	63	45	108	10	15	25	279	215	494
Unascertained	23	10	33	5	3	8	233	126	359
Totals	582	611	1,193	117	123	240	4,118	3,805	7,923

TABLE No. 3—LONDON.

Showing nativity of patients admitted during the year and since opening of hospital.

Nativity.	Admissions of year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total admissions	117	123	240	4,118	3,805	7,923
Total born in Canada	83	102	185	2,641	2,498	5,139
Armenia						
Assyria				2	1	3
Austria						
Australia						
Belgium	2		2	2		2
Bulgaria						
Central America						
China				1		1
Denmark					2	2
England	21	10	31	516	398	914
France				5	5	10
Finland						
Galicia						
Germany		3	3	48	48	96
Greece						
Holland				2		2
Hungary						
Ireland	1	2	3	376	436	812
Italy				3	4	7
Japan						
Macedonia						
Other British Possessions				6	2	8
Norway						
Roumania						
Russia	3	1	4	9	5	14
Scotland	4	1	5	293	225	518
South America						
Spain						
Sweden				6		6
Turkey				5		5
United States	3	4	7	122	109	231
West Indies				2	1	3
Unascertained				79	71	150
Totals	117	123	240	4,118	3,805	7,923

TABLE No. 4—LONDON.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional: Clergy, Military and Naval Officers, Physicians, Lawyers Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	5	.....	5	82	25	107
Commercial: Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	10	16	16	307	52	359
Agricultural and Pastoral: Farmers, Gardeners, Stock Men, etc.	39	.....	39	1,609	121	1,730
Mechanics at Outdoor Vocations: Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	9	.....	9	356	.....	356
Mechanics, etc.. at Sedentary Vocations: Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	9	8	17	319	135	454
Domestic Service: Waiters, Cooks, Servants, etc.	1	10	11	25	528	553
Education and Higher Domestic Duties: Governesses. Teachers, Students. Housekeepers, Nurses, etc.	.....	78	78	52	2,312	2,364
Miners, Marine Engineers, Railway Employees, Seamen, Soldiers, etc.	20	.....	20	58	.....	58
Laborers	18	.....	18	1,015	1	1,016
No Occupation	6	21	27	92	284	376
Unascertained	.....	.....	.....	203	347	550
Totals	117	123	240	4,118	3,805	7,923

TABLE No. 5—LONDON.

Showing the Counties and Districts from which Patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since Opening.			Warrant Cases. Admitted during year.			Warrant Cases. Admitted since opening.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	....	1	1	12	8	20	....	....	....	8	2	10	1	1	2
Brant	....	....	....	38	37	75	....	....	....	20	12	32	2	4	6
Bruce	5	12	17	306	250	556	....	4	4	163	81	244	54	55	109
Carleton	....	....	....	4	7	11	....	....	....	....	2	2	....	....	....
Dufferin	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dundas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Durham	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Elgin	12	7	19	291	281	572	2	....	2	80	27	107	42	36	78
Essex	19	9	28	301	263	564	3	1	4	111	63	174	52	57	109
Frontenac	....	....	....	5	8	13	....	....	....	....	1	1	....	....	....
Glengarry	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Grenville	....	....	....	....	....	....	....	....	....	10	9	19	....	....	....
Grey	....	2	2	20	22	42	....	....	....	11	3	14	3	4	7
Haldimand	....	....	....	22	24	46	....	....	....	7	3	10	....	1	1
Halton	....	....	....	10	7	17	....	....	....	2	5	7	....	1	1
Hastings	....	....	....	5	9	14	....	....	....	136	79	215	....	....	....
Huron	5	11	16	387	384	771	4	2	6	90	45	135	51	59	110
Kent	11	8	19	309	300	609	4	1	5	201	64	265	48	49	97
Lambton	14	12	26	445	340	785	2	....	2	8	2	10	66	50	116
Lanark	....	....	....	3	3	6	....	....	....	....	....	....	....	....	....
Leeds	....	....	....	....	5	5	....	....	....	....	....	....	....	....	....
Lennox & Addington	....	....	....	3	1	4	....	....	....	1	....	1	....	....	....
Lincoln	....	....	....	11	6	17	....	....	....	8	1	9	....	....	....
Middlesex	35	39	74	999	1,010	2,009	6	1	7	294	163	457	119	161	280
Muskoka District	1	....	1	1	....	1	....	....	....	....	....	....	....	....	....
Nipissing District	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
Norfolk	....	....	....	34	38	72	....	....	....	23	13	36	....	....	....
Northumberland	....	....	....	15	10	25	....	....	....	4	2	6	....	....	....
Ontario	....	....	....	6	13	19	....	....	....	1	8	9	4	....	4
Oxford	7	8	15	338	269	607	5	....	5	159	45	204	45	47	92
Parry Sound District	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Peel	....	....	....	5	6	11	....	....	....	3	5	8	....	....	....
Perth	6	13	19	339	299	638	2	2	4	142	68	210	58	54	112
Peterborough	....	....	....	1	6	7	....	....	....	1	6	7	....	....	....
Prescott	....	....	....	2	3	5	....	....	....	1	1	2	....	....	....
Prince Edward	....	....	....	1	1	2	....	....	....	....	1	1	....	....	....
Rainy River District	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Renfrew	....	....	....	13	21	34	....	....	....	....	....	....	....	....	....
Russell	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Simcoe	....	....	....	7	7	14	....	....	....	5	7	12	1	3	4
Stormont	....	....	....	12	14	26	....	....	....	1	....	1	....	....	....
Thunder Bay District	....	1	1	1	1	2	....	....	....	....	....	....	1	2	3
Victoria	....	....	....	32	22	55	....	....	....	9	9	18	....	....	....
Waterloo	....	....	....	9	7	16	....	....	....	7	7	14	1	....	1
Welland	....	....	....	20	16	36	....	....	....	3	5	8	....	....	....
Wellington	1	....	1	22	26	48	....	....	....	14	11	25	1	....	1
Wentworth	....	....	....	47	48	95	....	....	....	6	9	15	2	1	3
York	1	....	1	33	26	59	....	....	....	30	31	61	2	6	8
Unascertained	....	....	....	8	6	14	....	....	....	1	....	1	28	20	48
Totals	117	123	240	4,118	3,805	7,923	28	11	39	1,560	790	2,350	582	611	1193

TABLE No. 6—LONDON.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	10	11	21	5	4	9	12
Mental Strain, Worry and Overwork (not included in above)	10	15	25	6	7	13	12
Religious Excitement	.....	1	1	.....	.....	.....	1
Love Affairs (including seduction)	5	1	6	2	1	3	3
Fright and Nervous Shock	3	5	8	1	1	2	6
PHYSICAL.							
Alcoholism	4	.....	4	1	1	2	2
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	1	.....	1	.....	.....	.....	1
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	1	.....	1	.....	.....	.....	1
Accident or Injury	.....	1	1	.....	.....	.....	1
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	2	2	.....	.....	.....	2
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	5	5	.....	.....	.....	5
Fevers	.....	1	1	.....	.....	.....	1
Privation and Overwork	6	3	9	2	1	3	6
Epilepsy	3	3	6	1	.....	1	5
Other Convulsive Diseases	.....	1	1	.....	.....	.....	1
Diseases of Brain and Skull	2	.....	2	.....	.....	.....	2
Senility	.....	1	1	.....	.....	.....	1
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abu e of Drugs	1	.....	1	.....	.....	.....	1
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-Infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	3	2	5	.....	.....	.....	5
HEREDITARY.							
Congenital Defect	4	2	6	.....	.....	.....	6
Unascertained	64	69	133	47	40	87	46
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	117	123	240	65	55	120	120

TABLE No. 7—LONDON.

Showing hereditary tendency to insanity in patients admitted during the year and since the opening of the Hospital.

—	Admitted during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Paternal Branch	7	6	13	110	114	224
Maternal Branch	12	18	30	124	158	282
Paternal and Maternal Branches	11	7	18	45	51	96
Collateral Branches	13	8	21	306	254	560
No Hereditary Tendency	58	73	131	835	865	1,700
Unascertained	16	11	27	328	290	618
Totals	117	123	240	1,748	1,732	3,480

TABLE No. 8—LONDON.

Showing summary of Probational discharges during the year.

—	Male.	Female.	Total.
Number Granted Discharge	66	87	153
Discharged, Recovered	23	28	51
" Improved	14	28	42
" Unimproved			
Died	1	2	3
Returned to Hospital	18	18	36
Absent on Probation on Oct. 31st, 1917	10	11	21

TABLE No. 9—LONDON.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	6	3	9
Influenza	.....	.....	.....	3	2	5
Cerebro-spinal Meningitis	.....	.....	.....	.....	1	1
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	1	1	7	10	17
Septicæmia	.....	.....	.....	11	11	22
Dysentery	.....	.....	.....	52	67	119
Syphilis	.....	.....	.....	1	1	2
Tuberculosis	4	5	9	175	213	388
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	1	1	2
Arthritis Deformans	.....	.....	.....	1	1	2
Diabetes Mellitus	.....	.....	.....	6	2	8
Diseases of the Digestive System:—						
Mouth, salivary glands	1	.....	1	1	.....	1
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	.....	.....	1	.....	1
Diseases of the Intestines:—						
Diseases of the Liver	.....	.....	.....	13	14	27
Diseases of the Pancreas	.....	.....	.....	1	1	2
Diseases of the Peritoneum	.....	.....	.....	32	26	58
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....
" " Bronchi	.....	.....	.....	19	12	31
" " Lungs	4	8	12	87	109	196
" " Pleura	.....	.....	.....	6	1	7
Diseases of the Circulatory System:—						
Diseases of the Pericardium	.....	1	1	.....	2	2
" " Heart	2	5	7	87	89	176
Arterio-sclerosis	1	.....	1	16	24	40
Aneurism	.....	.....	.....	4	1	5
Diseases of the Blood and Ductless Glands:—						
Anæmia	.....	.....	.....	3	4	7
Pernicious Anæmia	1	1	2	2	2	4
Leukæmia	.....	.....	.....	1	.....	1
Exophthalmic Goitre	.....	.....	.....	1	1	2
Diseases of the Genito-Urinary System	3	1	4	20	8	28
Carried Forward	16	22	38	557	606	1,163

TABLE No. 9—LONDON—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	16	22	38	557	606	1,163
Diseases of the Nervous System:—						
Diseases of the Nerves				5	5	10
" " Spinal Cord					1	1
" " Meninges				11	7	18
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	3	3	6	99	67	166
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)		1	1	28	13	41
Epilepsy	2	1	3	128	75	203
Mental Diseases:—						
Exhaustion of Acute Mental Disease	1	8	9	78	73	151
Exhaustion of Chronic Mental Disease	1	2	3	63	63	126
General Paresis	4		4	141	19	160
Intoxications:—						
Alcoholism						
Morphinism						
Metallic Poisoning						
Heat Stroke					1	1
Debility of Old Age	8	12	20	200	198	398
Accident	1	1	2	11	8	19
Suicide	1	1	2	13	10	23
Surgical Diseases	1		1	3	4	7
Gynæcological Diseases					1	1
Malignant New Growths, or Cancer				18	35	53
Totals	38	51	89	1,355	1,186	2,541

TABLE No. 10—LONDON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female	Total.	Male.	Female	Total.	Male.	Female	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	.....	....	....	....	....	....	....
(b) Infection Delirium	....	....	.....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	.....	....	....	....	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	.....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	....	11	11	....	2	2	....	8	8
(c) Neurasthenia	2	1	3	2	....	2	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	1	....	1	....	....	....	....	....	....
(b) Chronic "	....	....	.....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	2	....	2	....	....	....	....	....	....
(b) Delirium Tremens	1	....	1	1	....	1	....	....	....
(c) Korsakow's Psychoses	....	....	.....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	.....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	.....	....	....	....	....	....	....
(f) " Paranoia	....	....	.....	....	....	....	....	....	....
(g) " Paresis	....	....	.....	....	....	....	....	....	....
(h) Morphinism	....	....	.....	....	....	....	....	....	....
(i) Cocainism	....	....	.....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	.....	....	....	....	....	....	....
(b) Cretinism	....	....	.....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	13	9	22	8	5	13	5	10	15
(b) Catatonic	12	15	27	9	10	19	4	6	10
(c) Paranoid	19	4	23	5	10	15	1	2	3
General Paresis	8	....	8	1	....	1	5	....	5
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	.....	....	....	....	....	2	2
(b) Huntingdon's Chorea	....	2	2	....	....	....	....	1	1
(c) Multiple Sclerosis	1	....	1	....	....	....	....	....	....
(d) Cerebral Syphilis	1	1	2	1	....	1	....	....	....
(e) Tabetic Psychoses	3	....	3	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	1	2	3	....	....	....	1	2	3
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	.....	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	....	19	19	2	10	12	1	2	3
(b) Pre-senile Delusional Psychoses	....	....	.....	....	....	....	....	....	....
(c) Senile Dementia	13	10	23	3	5	8	11	14	25
Manic Depressive Psychoses:—									
(a) Manic States	9	12	21	9	13	22	6	3	9
(b) Depressed States	10	14	24	5	6	11	....	....	....
(c) Mixed States	....	....	.....	6	3	9	....	....	....
Carried Forward	96	100	196	52	64	116	34	50	84

TABLE No. 10—LONDON—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female	Total.	Male.	Female	Total.	Male.	Female	Total.
Brought Forward	96	100	196	52	64	116	34	50	84
Paranoia	1	3	4	1	....	1	....	....	....
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	5	6	11	2	....	2	2	1	3
(b) Hysterical Psychoses.....	....	4	4	....	3	3	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	11	10	21	2	1	3	2	....	2
(b) Idiocy.....	....	....	....	....	....	....	....	....	....
Not Diagnosed.....	4	....	4	1	....	1	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals.....	117	123	240	58	68	126	38	51	89

TABLE No. 11—LONDON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	40	25	2	2	1	12
From 1 to 2 months.....	16	11	6	1	1	5
" 2 " 3 "	10	18	6	1	.....	.....
" 3 " 4 "	9	18	7	2	.....	1
" 4 " 5 "	7	13	9	.....	.....	1
" 5 " 6 "	13	15	7	7	.....	2
" 6 " 9 "	15	15	14	9	.....	9
" 9 " 12 "	15	28	8	9	.....	2
" 12 " 18 "	10	40	10	6	.....	4
" 18 months to 2 years..	10	48	.....	.....	.....	1
" 2 to 3 years.....	7	80	2	5	.....	7
" 3 " 4 "	10	73	.....	5	.....	6
" 4 " 5 "	13	56	2	.....	.....	2
" 5 " 10 "	22	223	.....	1	1	12
" 10 " 15 "	15	173	.....	2	.....	8
" 15 " 20 "	10	106	.....	.....	.....	1
" 20 years and upwards	18	251	.....	.....	.....	16
Totals	240	1,193	73	50	3	89

HOSPITAL FOR INSANE, MIMICO.

November 1st, 1917.

To Williard W. Dunlop, Esq.,

Inspector of Hospitals for Insane, Parliament Buildings, Toronto, Ont.

Sir,—In accordance with the requirements of the Statute, I have the honour to submit herewith the Twenty-third Annual Report of this Hospital for the year ending October 31st, 1917.

——	Male.	Female.	Total.	Male.	Female.	Total.
There were in residence on October 31st, 1916	.....	.....	.....	339	339	678
Admitted during the year by Warrant...	60	30	90			
Admitted during the year by Certificate .	43	38	81			
Total admitted during the year				103	68	171
Total number under treatment during year				442	407	849
Discharged during the year as recovered..	31	24	55			
Discharged during the year as improved..	18	13	31			
Discharged during the year as unimproved	2	2	4			
Total discharged during the year	51	39	90			
Number died during the year.....	28	19	47			
Number eloped during the year	1	.....	1			
Number transferred during the year	16	16	30			
Total number leaving the hospital during year.....	.....	.....	.....	96	72	168
Total number remaining in the Hospital on October 31st, 1916.....	.....	.....	.....	346	335	681

Admissions.

During the past official year there were one hundred and seventy-one patients admitted to this Hospital, ninety by Lieutenant-Governor's warrant and eighty-one by medical certificate. Of this number one hundred and three were men and sixty-eight were women. Ninety-two of those admitted were single, sixty-three were married and sixteen had lost their helpmates, seven being men and nine women. Of the ninety-two single persons admitted, sixty-nine were men and twenty-three were women, while of the seventy-nine who had been married, thirty-four were men and forty-five were women. Among the men an hereditary tendency could be traced in twenty cases and among the women it was found to exist in twenty-eight cases, amounting in all to about twenty-eight per cent. of the total admissions.

Adverse conditions in life, such as loss of friends through illness at home or worry and anxiety about the absence or loss of near relatives in the war, business troubles, mental strain and over-work were believed to have been contributory

causes in forty cases, twenty-four men and sixteen women. In three cases, all men, the cause was ascribed to the long continued use of alcohol.

Of the total number admitted thirty-eight were reported to have been ill for a period less than two months while seventy-six had been ill a year or more before their admission to the Hospital for treatment.

One hundred and eleven were native born, twenty-eight were born in Great Britain, while the remaining forty-two were born in other countries.

Of the total number admitted thirty-one were Presbyterians, thirty-two were Methodists, thirty-three were Episcopalians and fifty-five were Roman Catholics.

Fifteen of the men were mechanics engaged in out-of-door vocations, twenty-four were agriculturalists and thirty-six were labourers.

Four patients of the total number admitted were under twenty years of age, forty-four were between twenty and thirty years, forty-six were between thirty and forty years, thirty-four between forty and fifty years, twenty-four between fifty and sixty years, twelve between sixty and seventy years and seven between seventy and eighty years of age.

Discharges.

During the year ninety patients were discharged from this Hospital, fifty-one men and thirty-nine women, and thirty were transferred to other hospitals, sixteen men and fourteen women. Of the total number discharged forty-six had been under treatment in the Hospital for a period less than a year, while nearly all those discharged as improved, thirty-one in number, entirely recovered subsequently at home and have been able to live continuously away from the Hospital. Seventy patients, forty-two men and twenty-eight women, were allowed out of the Hospital on probation, either with their friends at their homes, or with employers who engaged them in useful occupations and who were responsible for them while on trial. The men who were without homes or relatives and who were allowed out on trial in this way with employers were commonly able to earn good wages, and at the expiration of their probational terms would find themselves with something to their credit in the savings bank.

Deaths.

During the past year forty-seven patients died at this Hospital, twenty-eight men and nineteen women. Of this number twenty-seven died under the age of fifty years, six between fifty and sixty, six between sixty and seventy, seven between seventy and eighty and one at eighty-three years of age.

Nearly fifty per cent. of the deaths were due to exhaustion of the acute or chronic psychoses and about fourteen per cent. was due to tuberculosis.

Rewiring of Cottages.

Ten years ago the work of rewiring the cottages in keeping with modern methods was commenced and the plan then approved was to place the wire in iron pipes and conceal the pipes in the walls and floors. The work was undertaken by the engineers staff and was continued as rapidly as possible and during the past year Cottages 1 and 2, the last of the ten cottages, were completed.

The Administration building was also rewired, but as the method advised by the director did not include the concealed pipes it presents the appearance of having been done in a less workmanlike way than the cottages.

Wiring Farm Buildings.

Until the past year the management had never been able to arrange for the wiring and lighting of the farm buildings at the North Farm. During the year the farm cottage for patients and the farm buildings as well as the farmer's and assistant farmer's and carpenter's houses were all wired and are now lighted by Hydro power. This acquisition is not only better and more convenient than the former method of lighting by coal oil, but it is much safer as it greatly reduces the fire hazard.

The pumping station near the lake was also wired for the first time and light is now supplied to the quarters of the assistant engineer who resides at that place.

Farm and Garden.

The crops of hay, ensilage, grain and roots at both the North and South Farms were more abundant during the past year than for several previous years, and the farmer himself, with his staff, seemed to have renewed interest in his work because he again enjoyed an opportunity of exercising some individual initiative and experience in his farming operations. No matter how well equipped a director may be technically, if he insist in authoritatively directing the practical men under him in their own departments with too much detail they will soon lose interest and effectiveness; their originality and devotion will be destroyed and there will soon be impaired individual growth and development.

The yield of garden products was also greatly in excess of the past several years, and the quality of the fruit and vegetables and roots was never better. The gardener also often expressed his increased interest in his work because he could again use his own knowledge and experience in selecting the various kinds of roots and vegetables which he knew would be suitable for the soil from his intimate and extended acquaintance with it.

With the present increased cost of all food products which have to be purchased for the Institution use with money supplied by the Province and specially granted in appropriations by the Legislature, the importance of home production up to the highest limit can hardly be over-estimated. Every extra bushel of potatoes or onions and every extra ton of cabbage or marrow which can be produced on the farm or garden beyond the average yield, and without the extra effort of war time, will save a certain weight of beef or bacon and will add to the comfort and well being of a given number of patients. It is, therefore, a patriotic duty as well as an economic necessity that farm and garden production shall be maintained at the highest possible level.

Drainage at North Farm.

Reference was made last year to some extensive drainage at this place in 1915 when the appropriation was not large enough to complete the work, but during the past year a further appropriation was obtained and the work was completed. As the farm is low and level and during wet seasons has been uncertain in productiveness, this improved drainage system should add much to the value of the farm and give much greater certainty of uniformity in the annual yield.

Steam Boiler at Piggery.

In former years a small agricultural boiler was used at the piggery for boiling the swill and it was often found to be inadequate for the purpose. During the past year a vertical boiler of ten horse-power was installed to supply steam to be conveyed to the swill receptacle for the purpose of boiling the swill, and this plan has been demonstrated as much more efficient.

Officers and Employees.

There were one hundred and twenty-five employees whose services were terminated at the Institution during the year, seventy being men and fifty-five being women. Of this total number eighty resigned and forty-five were dismissed for various reasons, intemperance ranking lower than in former years.

In the early part of the official year the Grim Reaper made frequent inroads upon the older members of our staff.

Mr. Mark Keilty died after several months' illness on November 5th, and his loss to the Institution cannot well be estimated. He was formerly a merchant and among the vicissitudes of business life he was induced to accept the position of storekeeper at the Hospital for the Insane at Toronto in October, 1890, and he discharged his duties in that position so satisfactorily to the Institution and the Government that he was advanced to the greater responsibility of Bursar at this place on June 1st, 1904. He was blessed with a genial and cheerful disposition, radiating a wealth of good feeling upon his brother officers and those with whom he came in daily contact. His steady aim was to see that the goods purchased by himself for the use of the patients were suitable to their needs and worth the money paid for them by the Government. He was loyal, generous and just and took infinite pains to see that everyone had fair play. He was calm and considerate yet courageous in the interest of right. He cared as much for the poor and friendless as for those in higher stations. He was a good friend, an ideal officer and always a gentleman, and as such his services to the Government were invaluable.

Mr. James Ailles was appointed to the position of engineer at this place in September, 1890, and subsequently when these duties became more arduous he was given the post of engineer at the pumping station. He was an intelligent and energetic servant, and after a continuous service of twenty-six years he died on duty without a moment's warning on November 6th.

Mr. Benjamin Watson was, upon my own recommendation, appointed as the first mason at this place in April, 1895, and the work which he accomplished in his department during those twenty-one years has amply justified the recommendation. During the past two years his health had been failing gradually and he died on December 9th.

Mr. Andrew Craib accepted a position as fireman in 1894 and soon afterwards he was given the position of electrician, which he held until about three years ago when appendicitis necessitated a surgical operation. He has never recovered his physical vigor since the operation, and finding himself unable to attend to the work without great suffering he resigned on the 30th ultimo. Mr. Craib is fifty years of age, and during the best period of that time, namely, twenty-three years, he has given the best of himself to the hospital service here and is now practically crippled for the rest of his life through no fault of his own.

In cases of this kind it would seem to my mind only fair and just that men who have spent the best part of their lives in the hospital service, and who have become incapacitated through no fault of their own, should receive an annual allowance on retirement, enough at least to keep the wolf away. Many cases of hardship arise from time to time in the service because the principle of superannuation has not so far been introduced into this branch of the service.

On January 1st, 1917, Dr. E. J. Lyon resigned his position at this place and he was succeeded by Dr. J. A. MacArthur on March 1st, 1917.

Gratefully acknowledging your consideration and counsel during the past year.

I have the honour to be, Sir,

Your obedient servant,

N. H. Beemer,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, MIMICO, FOR THE YEAR ENDING OCTOBER 31ST, 1917

TABLE No. 1—MIMICO.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	340	320	660			
In Residence October 31st, 1916	.....	.....	.....	339	339	678
Admitted during year 1916-17 :—						
By Warrant	60	30	90			
By Medical Certificate	43	38	81	103	68	171
Total number under treatment during year	.....	.....	.....	442	407	849
Discharges during year :—						
As recovered	31	24	55			
" improved	18	13	31			
" unimproved	2	2	4			
" not insane	.....	.....	.....			
Total number discharged during year	51	39	90			
Died	28	19	47			
Deported	.....	.....	.....			
Eloped	1	.....	1			
Transferred	16	14	30	96	72	168
Remaining in Hospital October 31st, 1917	.....	.....	.....	346	335	681
Total number admitted since opening of Hospital	.....	.....	.....	1,965	1,773	3,738
Total number discharged since opening of Hospital	672	600	1,272			
Total number died since opening of Hospital	570	481	1,051			
Total number deported since opening of Hospital	46	9	55			
Total number eloped since opening of Hospital	49	1	50			
Total number transferred since opening of Hospital	282	347	629	1,619	1,438	3,057
Total remaining in Hospital October 31st, 1917	.....	.....	.....	346	335	681
Daily average population	345.36	337.99	683.35			
Collective days' stay of all patients in residence during year	126,058	123,366	249,424			
Number of applications on fyle	31	18	49			

TABLE No. 2—MIMICO.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

	Admissions of Year.			In residence.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	69	23	92	245	153	398	1,214	690	1,904
Married	27	36	63	89	152	241	708	1,022	1,730
Widowed	7	9	16	12	29	41	43	59	102
Divorced	.....	.....	.....	.....	1	1	.....	2	2
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	103	68	171	346	335	681	1,965	1,773	3,738
RELIGION.									
Baptists	3	1	4	9	11	20	63	76	139
Congregationalists	.....	.....	.....	.....	1	1	4	7	11
Church of England	16	17	33	70	73	143	391	387	778
Methodists	17	15	32	72	94	166	427	460	887
Presbyterians	18	13	31	75	68	143	380	342	722
Roman Catholics	37	18	55	84	66	150	472	375	847
Other Denominations	11	3	14	27	12	39	157	77	234
Unascertained	1	1	2	9	10	19	71	49	120
Totals	103	68	171	346	335	681	1,965	1,773	3,738

TABLE No. 3—MIMICO.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total admissions	103	68	171	1,965	1,773	3,738
Total born in Canada	62	49	111	1,289	1,221	2,510
Armenia	.....	.....	.....	.....	.....	.....
Assyria	.....	.....	.....	1	.....	1
Austria	8	1	9	28	3	31
Australia	.....	.....	.....	1	.....	1
Belgium	.....	.....	.....	.....	.....	.....
Bulgaria	.....	.....	.....	1	.....	1
Central America	.....	.....	.....	.....	.....	.....
China	2	.....	2	2	.....	2
Denmark	.....	.....	.....	1	.....	1
England	9	6	15	223	179	402
France	.....	.....	.....	5	2	7
Finland	6	.....	6	31	6	37
Galicia	.....	.....	.....	1	.....	1
Germany	1	.....	1	23	8	31
Greece	1	.....	1	2	.....	2
Holland	.....	.....	.....	1	.....	1
Hungary	.....	.....	.....	.....	2	2
Ireland	5	3	8	164	189	353
Italy	5	.....	5	17	2	19
Japan	.....	.....	.....	.....	.....	.....
Macedonia	.....	.....	.....	1	.....	1
Other British Possessions	.....	.....	.....	1	7	8
Norway	.....	.....	.....	8	2	10
Roumania	.....	.....	.....	3	.....	3
Russia	.....	4	4	18	13	31
Scotland	4	1	5	77	76	153
South America	.....	.....	.....	.....	.....	.....
Spain	.....	.....	.....	.....	1	1
Sweden	.....	1	1	14	12	26
Turkey	.....	.....	.....	.....	.....	.....
United States	.....	3	3	33	34	67
West Indies	.....	.....	.....	2	.....	2
Unascertained	.....	.....	.....	18	16	34
Totals	103	68	171	1,965	1,773	3,738

TABLE No. 4—MIMICO.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional :— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc	3	.....	3	74	7	81
Commercial :— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	5	1	6	150	22	172
Agricultural and Pastoral :— Farmers, Gardeners, Stock Men, etc.	24	.....	24	558	.....	558
Mechanics at Outdoor Vocations :— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	15	.....	15	199	2	201
Mechanics, etc., at Sedentary Vocations : Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	3	5	8	122	63	185
Domestic Service :— Waiters, Cooks, Servants, etc	1	4	5	10	233	243
Education and Higher Domestic Duties :— Governesses, Teachers, Students, Housekeepers, Nurses, etc	1	51	52	24	1,224	1,248
Miners, Marine Engineers, Railway Employees, Seamen, etc	8	.....	8	53	.....	53
Laborers	36	.....	36	642	2	644
No Occupation	6	7	13	69	173	242
Unascertained	1	.....	1	64	47	111
Totals	103	68	171	1,965	1,773	3,738

TABLE No. 5—MIMICO.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant cases.						Remaining in residence.		
							Admitted during year.			Admitted since opening.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District ..	15	4	19	88	75	163	11	4	15	71	40	111	23	16	39
Brant	....	....	....	7	5	12	....	....	....	3	1	4	1	1	2
Bruce	1	....	1	4	4	8	1	....	1	3	1	4	...	...	....
Carleton	....	....	....	10	11	21	....	....	....	8	6	14	1	...	1
Dufferin	....	....	....	6	3	9	....	....	....	2	1	3	1	1	2
Dundas	....	....	....	3	5	8	....	....	....	2	3	5	2	...	2
Durham	1	....	1	14	20	34	....	....	....	7	8	15	5	4	9
Elgin	....	....	....	6	.....	6	....	....	....	4	....	4	1	...	1
Essex	....	....	....	5	2	7	....	....	....	.....	1	1	...	...	....
Frontenac	1	....	1	12	17	29	1	....	1	5	7	12	1	...	1
Glengarry	....	....	....	2	2	4	....	....	....	1	....	1	...	...	....
Grenville	....	....	....	4	6	10	....	....	....	2	3	5	...	...	....
Grey	....	1	1	19	18	37	....	....	....	12	8	20	2	6	8
Haldimand	....	....	....	1	1	2	....	....	....	.....	.....	.....	1	...	1
Halton	....	....	....	6	11	17	....	....	....	1	2	3	...	3	3
Haliburton	2	....	2	6	4	10	2	....	2	4	2	6	3	...	3
Hastings	....	....	....	23	33	56	....	....	....	15	25	40	...	1	1
Huron	....	....	....	5	6	11	....	....	....	1	1	2	...	...	....
Kent	....	....	....	4	.....	4	....	....	....	4	....	4	1	...	1
Lambton	....	....	....	5	5	10	....	....	....	4	3	7	...	...	....
Lanark	....	....	....	9	8	17	....	....	....	7	6	13	...	...	....
Leeds	....	....	....	1	3	4	....	....	....	1	2	3	...	...	....
Lennox and Addington	....	....	....	4	5	9	....	....	....	3	5	8	...	...	....
Lincoln	....	....	....	2	1	3	....	....	....	.....	.....	.....	1	...	1
Manitoulin	1	1	2	18	11	29	1	1	2	10	6	16	3	5	8
Middlesex	....	....	....	16	6	22	....	....	....	8	1	9	2	...	2
Muskoka District .	2	2	4	57	51	108	2	....	2	29	13	42	6	9	15
Nipissing District.	22	9	31	184	91	275	20	6	26	147	47	194	45	27	72
Norfolk	....	....	....	3	4	7	....	....	....	2	1	3	...	...	....
Northumberland ..	....	....	....	26	24	50	....	....	....	13	9	22	3	...	3
Ontario	7	2	9	153	162	315	2	....	2	75	41	116	20	29	49
Oxford	....	....	....	9	2	11	....	....	....	7	2	9	2	...	2
Parry Sound District	2	4	6	67	52	119	1	1	2	40	18	58	14	16	30
Peel	4	4	8	91	93	184	....	2	2	34	26	60	15	19	34
Perth	....	....	....	9	2	11	....	....	....	4	....	4	2	...	2
Peterborough	5	6	11	127	158	285	3	....	3	74	41	115	24	40	64
Prescott	....	....	....	4	3	7	....	....	....	4	3	7	...	...	....
Prince Edward ...	1	....	1	3	6	9	1	....	1	3	2	5	1	1	2
Rainy River District	3	2	5	36	24	60	1	2	3	30	21	51	6	8	14
Renfrew	....	....	....	4	5	9	....	....	....	4	3	7	...	...	....
Russell	....	....	....	3	1	4	....	....	....	3	....	3	...	...	....
Simcoe	16	13	29	269	234	503	4	2	6	98	43	141	45	43	88
Stormont	....	....	....	1	2	3	....	....	....	.....	1	1	...	...	....
Thunder Bay District	8	10	18	97	53	150	7	10	17	90	46	136	25	12	37
Victoria	4	6	10	145	132	277	2	1	3	97	37	134	30	33	63
Waterloo	....	....	....	5	2	7	....	....	....	3	1	4	1	...	1
Welland	....	....	....	3	2	5	....	....	....	2	2	4	2	...	2
Wellington	....	....	....	4	4	8	....	....	....	.....	1	1	1	1	2
Wentworth	....	1	1	.....	10	10	....	....	....	.....	3	3	...	2	2
York	7	3	10	375	391	766	1	1	2	192	172	364	54	58	112
Unascertained	1	....	1	10	3	13	....	....	....	2	3	5	2	...	2
Totals	103	68	171	1,965	1,773	3,738	60	30	90	1,131	668	1,799	346	335	681

TABLE No. 6—MIMICO.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc)	10	2	12	3	2	5	7
Mental Strain, Worry and Overwork (not included in above)	14	14	28	7	5	12	16
Religious Excitement	2	1	3	1	1	2	1
Love Affairs, including seduction	.....	2	2	.....	1	1	1
Fright and Nervous Shock	2	2	4	1	.....	1	3
PHYSICAL.							
Alcoholism	3	.....	3	.....	.....	.....	3
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	.....	.....	.....	.....	.....	.....	.....
Masturbation	1	.....	1	.....	.....	.....	1
Insolation	1	1	2	.....	.....	.....	2
Accident or Injury	3	.....	3	1	.....	1	2
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	4	4	.....	2	2	2
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	4	4	.....	2	2	2
Fevers	2	.....	2	1	.....	1	1
Privation and Overwork	1	.....	1	.....	.....	.....	1
Epilepsy	4	2	6	.....	.....	.....	6
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	.....	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	.....	.....	.....	.....	.....	.....	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	3	5	8	1	3	4	4
HEREDITARY.							
Congenital Defect	2	.....	2	.....	.....	.....	2
Unascertained	55	31	86	9	11	20	66
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	103	68	171	24	27	51	120

TABLE No. 7—MIMICO.

Showing hereditary tendency to insanity in patients admitted during the year.

—	Admitted during year.		
	Male.	Female.	Total.
Paternal Branch	7	8	15
Maternal Branch	5	11	16
Paternal and Maternal Branches	1	.....	1
Collateral Branches	7	7	14
No Hereditary Tendency	41	29	70
Unascertained	42	13	55
Totals	103	68	171

TABLE No. 8—MIMICO.

Showing summary of Probational Discharges during the year.

—	Male.	Female.	Total.
Number granted discharge	42	28	70
Discharged recovered	17	12	29
" Improved	6	5	11
" Unimproved	1	.....	1
Died	.....	.....	.....
Returned to Hospital	5	2	7
Absent on probation on October 31st, 1917	13	9	22

TABLE No 9—MIMICO.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases —						
Typhoid Fever	.....	.....	.....	5	5	10
Influenza	.....	.....	.....	.....	2	2
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	.....	.....	3	3	6
Septicæmia	.....	.....	.....	7	4	11
Dysentery	1	.....	1	10	18	28
Syphilis	.....	.....	.....	1	.....	1
Tuberculosis	4	3	7	65	92	157
Constitutional Diseases :—						
Rheumatism	.....	.....	.....	2	.....	2
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	3	4	7
Diseases of the Digestive System :—						
Mouth, salivary glands	.....	.....	.....	.....	.....	.....
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	.....	.....	.....	.....	.....
Stomach	.....	.....	.....	1	1	2
Diseases of the Intestines :—						
Diseases of the Liver	.....	.....	.....	4	1	5
Diseases of the Pancreas	.....	.....	.....	1	1	2
Diseases of the Peritoneum	.....	.....	.....	8	7	15
Diseases of the Respiratory System :—						
Diseases of the Nose and Larynx	.....	.....	.....	1	.....	1
Diseases of the Bronchi	1	.....	1	2	2	4
Diseases of the Lungs	1	1	2	34	29	63
Diseases of the Pleura	.....	.....	.....	1	.....	1
Diseases of the Circulatory System :—						
Diseases of the Pericardium	.....	.....	.....	1	1	2
Diseases of the Heart	3	1	4	51	44	95
Arterio-sclerosis	.....	.....	.....	4	5	9
Aneurism	.....	.....	.....	.....	1	1
Diseases of the Blood and Ductless Glands :—						
Anæmia	.....	.....	.....	6	7	13
Pernicious Anæmia	.....	.....	.....	4	.....	4
Leukæmia	.....	.....	.....	1	.....	1
Exophthalmic Goitre	.....	.....	.....	.....	1	1
Diseases of the Genito-Urinary System	1	.....	1	5	3	8
Carried forward	11	5	16	220	231	451

TABLE No. 9—MIMICO—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	11	5	16	220	231	451
Diseases of the Nervous System :—						
Diseases of the Nerves					2	2
Diseases of the Spinal Cord				10	2	12
Diseases of the Meninges						
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thromboids, Hæmorrhage, and other gross lesions)				42	30	72
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)				6	2	8
Epilepsy	1	2	3	69	23	92
Mental Diseases :—						
Exhaustion of Acute Mental Disease	9	4	13	57	39	96
Exhaustion of Chronic Mental Disease	5	6	11	45	34	79
General Paresis				42	17	59
Intoxications :—						
Alcoholism						
Morphinism						
Metallic Poisoning						
Heat Stroke						
Debility of Old Age	2	1	3	61	80	141
Accident				3	3	6
Suicide				4	2	6
Surgical Diseases				2	3	5
Gynæcological Diseases					1	1
Malignant New Growths, or Cancer		1	1	6	11	17
Unknown (died while on probation)				3	1	4
Totals	28	19	47	570	481	1,051

TABLE No. 10—MIMICO.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	.....	....	....	....	....	....	....
(b) Infection Delirium	....	....	.....	....	....	....	....	....	....
(c) Post Infection Psychoses	1	2	3	1	....	1	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	.....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	....	1	1	1	1	2	....	....	....
(c) Neurasthenia	....	....	.....	....	....	....	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	....	....	.....	2	....	2	....	....	....
(b) Chronic "	....	....	.....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	1	1	2	2	1	3	....	....	....
(b) Delirium Tremens	....	....	.....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	.....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	.....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	.....	....	....	....	....	....	....
(f) " Paranoia	....	....	.....	....	....	....	....	....	....
(g) " Paresis	....	....	.....	....	....	....	....	....	....
(h) Morphinism	....	....	.....	....	....	....	....	....	....
(i) Cocainism	....	....	.....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	.....	....	....	....	....	....	....
(b) Cretinism	....	....	.....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	6	....	6	7	....	7	3	1	4
(b) Catatonic	3	3	6	....	1	1	4	....	4
(c) Paranoid	4	3	7	2	3	5	2	....	2
General Paresis	1	....	1	1	....	1	....	1	1
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	.....	....	....	....	....	....	....
(b) Huntingdon's Chorea	....	1	1	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	.....	....	....	....	....	....	....
(d) Cerebral Syphilis	1	....	1	....	....	....	1	....	1
(e) Tabetic Psychoses	....	....	.....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	....	.....	....	....	....	....	....	....
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	.....	....	....	....	....	....	....
Involution Psychoses,—									
(a) Melancholia	4	1	5	2	1	3	1	1	2
(b) Pre-senile Delusional Psychoses	....	....	....	....	....	....	....	....	....
(c) Senile Dementia	5	2	7	1	....	1	3	....	3
Manic Depressive Psychoses:—									
(a) Manic States	16	9	25	12	5	17	6	2	8
(b) Depressed States	22	21	43	9	13	22	....	3	3
(e) Mixed States	14	9	23	7	8	15	2	1	3
Carried Forward	78	53	131	47	33	80	22	9	31

TABLE No. 10—MIMICO—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	78	53	131	47	33	80	22	9	31
Paranoia	1	4	5	....	2	2	....	1	1
Psychoses from Constitutional Neuroses :—									
(a) Epileptic Psychoses	5	2	7	....	2	2	1	3	4
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	1	....	1	....	....	....	....	....	....
States of Deficient Mental Development :—									
(a) Imbecility	6	3	9	1	1	2	1	2	3
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	12	6	18	3	1	4	4	4	8
Not Insane	....	....	....	....	....	....	....	....	....
Totals	103	68	171	51	39	90	28	19	47

TABLE No. 11—MIMICO.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	19	18	.....	2	1	5
From 1 to 2 months	19	12	.....	1	.....	.....
" 2 " 3 "	14	14	1	.....	.....	2
" 3 " 4 "	10	10	3	.....	.....	4
" 4 " 5 "	10	18	4	.....	1	.....
" 5 " 6 "	7	9	4	2	.....	1
" 6 " 9 "	10	32	10	3	.....	3
" 9 " 12 "	6	16	12	4	.....	3
" 12 " 18 "	11	41	10	5	2	2
" 18 months to 2 years.	6	20	1	1	.....	1
" 2 to 3 years	11	51	4	4	.....	3
" 3 " 4 "	1	49	2	2	.....	3
" 4 " 5 "	6	25	2	3	.....	1
" 5 " 10 "	9	141	2	4	.....	4
" 10 " 15 "	4	90	.....	.....	.....	2
" 15 " 20 "	2	53	.....	.....	.....	3
" 20 years and upwards	8	82	.....	.....	.....	4
Unascertained	18	.....	.....	.....	.....	.....
Totals	171	681	55	31	4	47

HOSPITAL FOR INSANE, PENETANGUISHENE.

ANNUAL REPORT OF THE MEDICAL SUPERINTENDENT FOR THE YEAR ENDING OCTOBER 31ST, 1917.

To W. W. DUNLOP, ESQ.,

Inspector of Ontario Hospitals for the Insane,
Parliament Buildings, Toronto.

SIR,—In accordance with the Statutory requirements I have the honour to submit the Fourteenth Annual Report of the Hospital for the Insane, Penetanguishene, for the year ending October 31st, 1917.

SUMMARY OF MOVEMENTS.

At the beginning of the year there were 165 male and 198 female patients in residence. During the year 9 men and 11 women died, 3 men eloped, 2 women were transferred and 13 men and 17 women were admitted from other institutions, and one man was admitted from the Haileybury district; one man and one woman remain out on probation, so that at the end of the year we have in actual residence 166 men, 201 women or a total of 167 men and 202 women on our register.

WORK DONE.

The general work of the Institution was satisfactorily performed notwithstanding the great difficulty in procuring help. A new roof was put on the old Officers' Quarters building, extensive changes and additions were made to the farmer's house; the north half of stable and drive-shed were shingled and repairs were made to Institution and to employees' houses where needed. The rewiring of main building was commenced in September and is being pushed to completion. Cement walk was laid to Nurses' Home and the grounds about the Home and rink were levelled and terraced; unsightly fences were removed in different parts of grounds, adding much to the general appearance of the place, and paint was applied where necessary.

HEALTH OF COMMUNITY.

I am pleased to report that the health of our people has been most satisfactory during the year. We have been absolutely free of typhoid, and la grippe, which was fairly severe in the town, did not affect us.

CHURCH SERVICES.

We are deeply indebted to the clergy of Penetanguishene this year as in the past for their ministrations to our people.

Staff.

There has been but few changes on the official staff. Dr. Freeman R. Guest, who came here in July, 1915, left on the 1st of September to take up general practice. A change in farm was made, F. Parker going to work in Midland and his place being filled by a practical farmer, James Hamilton, who was transferred from the Prison Farm at Guelph. The usual number of changes occurred among the employees, but we were very fortunate in being able to replace them.

I have again to thank all officers, artisans and employees for their loyalty and faithfulness in the discharge of their duties and you, Sir, for your counsel and support.

I have the honour to be, Sir,

Your obedient servant,

W. T. Wilson,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, PENETANGUISHENE, FOR THE YEAR ENDING OCTOBER 31ST, 1917

TABLE No. 1—PENETANGUISHENE.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	166	203	369			
In residence October 31st, 1916	.....	.....	.....	165	198	363
Admitted during year 1917 :—						
By Warrant	11	9	20			
By Medical Certificate	3	8	11	14	17	31
Total number under treatment during year	.....	.....	.....	179	215	394
Discharges during year:—						
As recovered	.....	.....	.....			
As improved	.....	.....	.....			
As unimproved	.....	.....	.....			
As not insane	.....	.....	.....			
Total number discharged during year	.....	.....	.....			
Died	9	11	20			
Deported	.....	.....	.....			
Eloped	3	.....	3			
Transferred	.....	2	2	12	13	25
Remaining in Hospital October 31st, 1917	.....	.....	.....	167	202	369
Total number admitted since opening of Hospital	.....	.....	.....	319	379	698
Total number discharged since opening of Hospital	17	22	39			
Total number died since opening of Hospital	101	129	230			
Total number deported since opening of Hospital	9	.....	9			
Total number eloped since opening of Hospital	13	.....	13			
Total number transferred since opening of Hospital	12	26	38	152	177	329
Total remaining in Hospital October 31st, 1917	.....	.....	.....	167	202	369
Daily average population	163.75	201.38	365.14			
Collective days' stay of all patients in residence during year	59,771	73,506	133,277			
Number of applications on fyle	.....	.....	.....			

TABLE No. 2—PENETANGUISHENE.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

—	Admissions of Year.			In residence			Admissions since opening		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	11	9	20	132	114	246	236	194	430
Married	1	5	6	33	84	117	74	173	247
Widowed	2	3	5	2	4	6	2	5	7
Divorced	.....	.....	.....	.....	.....	.....	.....	.....	.....
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....	7	7	14
Totals	14	17	31	167	202	369	319	379	698
RELIGION.									
Baptists	.....	.....	.....	6	14	20	12	16	28
Congregationalists	.....	.....	.....	.....	.....	.....	.....	.....	.....
Episcopalians	1	2	3	23	52	75	60	91	151
Methodists	.....	4	4	30	39	69	53	74	127
Presbyterians	3	3	6	18	20	38	41	59	100
Roman Catholics	5	6	11	55	50	105	81	90	171
Other Denominations	2	2	4	18	11	29	39	30	69
Unascertained	3	.....	3	17	16	33	33	19	52
Totals	14	17	31	167	202	369	319	379	698

TABLE No. 3—PENETANGUISHENE.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	14	17	31	319	379	698
Total born in Canada	5	10	15	169	222	391
Armenia					1	1
Assyria					2	2
Austria	2		2	5		5
Australia						
Belgium						
Bulgaria	1		1	1		1
Central America						
China						
Denmark					1	1
England	2	3	5	51	48	99
France				1	1	2
Finland	1		1	9	2	11
Galicia	1		1	2		2
Germany				6	5	11
Greece				1		1
Holland						
Hungary						
Ireland		1	1	21	47	68
Italy				5	1	6
Japan						
Macedonia				1		1
Other British Possessions						
Norway				1		1
Roumania						
Russia		1	1	6	5	11
Scotland	2	1	3	12	21	33
South America						
Spain						
Sweden				4	2	6
Turkey						
United States				8	6	14
West Indies						
Unascertained		1	1	16	15	31
Totals	14	17	31	319	379	698

TABLE No. 4—PENETANGUISHENE.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional :— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	.....	.....	.....	3	.....	3
Commercial :— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	.....	.....	.....	4	1	5
Agricultural and Pastoral :— Farmers, Gardeners, Stockmen, etc.	1	.....	1	69	.....	69
Mechanics at Outdoor Vocations :— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	.....	.....	.....	23	.....	23
Mechanics, etc., at Sedentary Vocations :— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	.....	.....	.....	10	11	21
Domestic Service :— Waiters, Cooks, Servants, etc.	.....	6	6	.....	135	135
Education and Higher Domestic Duties :— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	.....	9	9	6	143	149
Miners, Marine Engineers, Railway Employees, Seamen, etc.	2	.....	2	4	.....	4
Laborers	10	.....	10	157	1	158
No Occupation	1	2	3	18	56	74
Unascertained	.....	.....	.....	25	32	57
Totals	14	17	31	319	379	698

TABLE No. 5—PENETANGUISHENE.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant Cases. Admitted during year.			Warrant Cases. Admitted since opening.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	4	1	5	22	12	34	3	1	4	15	9	24	15	7	22
Brant	....	....	....	1	1	2	....	....	....	....	....	....	1	1	2
Bruce	....	1	1	1	6	7	....	....	....	1	3	4	1	3	4
Carleton	....	....	....	1	4	5	....	....	....	1	2	3	1	2	3
Dufferin	....	....	....	1	4	5	....	....	....	1	1	2	1	2	3
Dundas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Durham	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....
Elgin	....	....	....	1	4	5	....	....	....	1	3	4	....	3	3
Essex	....	....	....	....	2	2	....	....	....	....	2	2	....	....	....
Frontenac	....	....	....	....	4	4	....	....	....	1	2	3	....	3	3
Glengarry	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Grenville	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Grey	....	....	....	14	5	19	....	....	....	11	4	15	6	3	9
Haldimand	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Halton	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....
Hastings	....	....	....	1	6	7	....	....	....	1	6	7	1	1	2
Huron	....	....	....	2	3	5	....	....	....	1	....	1	....	2	2
Kent	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lambton	....	....	....	1	3	4	....	....	....	1	1	2	....	1	1
Lanark	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
Leeds	....	....	....	1	1	2	....	....	....	....	1	1	....	1	1
Lennox & Addington	....	....	....	1	6	7	....	....	....	....	5	5	....	3	3
Lincoln	....	....	....	2	2	4	....	....	....	2	2	4	....	....	....
Middlesex	....	....	....	5	8	13	....	....	....	4	4	8	1	1	2
Muskoka District	....	....	....	12	10	22	....	....	....	9	7	16	7	5	12
Nipissing District	4	4	8	16	11	27	4	3	7	17	8	25	8	7	15
Norfolk	....	....	....	....	3	3	....	....	....	....	....	....	....	2	2
Northumberland	....	....	....	5	10	15	....	....	....	2	4	6	2	6	8
Ontario	2	....	2	18	13	31	1	....	1	16	6	22	12	9	21
Oxford	....	....	....	2	2	4	....	....	....	2	1	3	1	....	1
Parry Sound Dist	....	1	1	6	2	8	....	....	....	6	....	6	3	1	4
Peel	....	....	....	1	4	5	....	....	....	....	2	2	....	3	3
Perth	....	....	....	1	3	4	....	....	....	1	2	3	....	1	1
Peterborough	....	....	....	6	3	9	....	....	....	6	3	9	4	2	6
Prescott	....	....	....	2	1	3	....	....	....	1	....	1	2	....	2
Prince Edward	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rainy River Dist	....	....	....	10	3	13	....	....	....	10	3	13	5	1	6
Renfrew	....	....	....	1	3	4	....	....	....	2	1	3	....	3	3
Russell	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Simcoe	2	1	3	72	91	163	1	....	1	29	29	58	26	41	67
Stormont	....	....	....	....	1	1	....	....	....	....	1	1	....	1	1
Thunder Bay Dist.	2	1	3	14	9	23	2	1	3	14	9	23	12	4	16
Victoria	....	....	....	7	7	14	....	....	....	6	6	12	3	5	8
Waterloo	....	....	....	2	1	3	....	....	....	2	1	3	....	1	1
Welland	....	....	....	....	2	2	....	....	....	1	....	1	....	1	1
Wellington	....	....	....	3	3	6	....	....	....	1	....	1	2	3	5
Wentworth	....	....	....	7	2	9	....	....	....	2	2	4	5	2	7
York	....	8	8	62	111	173	....	4	4	52	60	112	37	67	104
Unascertained	....	....	....	16	10	26	....	....	....	....	....	....	11	3	14
Totals	14	17	31	319	379	698	11	9	20	219	190	409	167	202	369

TABLE No. 6.—PENETANGUISHENE.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	.....	.....	.....	.....	.....	.....	.....
Mental strain, Worry and Overwork (not included in above)	.....	.....	.....	.....	.....	.....	.....
Religious Excitement	.....	.....	.....	.....	.....	.....	.....
Love affairs, including seduction	.....	.....	.....	.....	.....	.....	.....
Fright and Nervous Shock	1	.....	1	.....	.....	.....	.....
PHYSICAL.							
Alcoholism	.....	.....	.....	.....	.....	.....	.....
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	.....	.....	.....	.....	.....	.....	.....
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	.....	.....	.....	.....	.....	.....	.....
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	.....	.....	.....	.....	.....	.....
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	.....	.....	.....	.....	.....	.....
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	.....	.....	.....	.....	.....	.....	.....
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	.....	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	.....	.....	.....	.....	.....	.....	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	.....	.....	.....	.....	.....	.....	.....
HEREDITARY.							
Congenital Defect	.....	.....	.....	.....	.....	.....	.....
Unascertained	13	17	30	1	4	5	26
Not Insane	.....	.....	.....	.....	.....	.....	.....
Total	14	17	31	1	4	5	26

TABLE No. 7—PENETANGUISHENE.

Showing hereditary tendency to insanity in patients admitted during the year and since the opening of the Hospital.

	Admitted During Year.			Since Opening.		
	Male.	Female.	Total	Male.	Female.	Total.
Paternal Branch	.....	1	1	25	34	59
Maternal Branch	.....	1	1	17	31	48
Paternal and Maternal Branches	1	.....	1	6	8	14
Collateral Branches	.....	3	3	21	25	46
No Hereditary Tendency	3	3	6	101	113	214
Unascertained	10	9	19	149	168	317
Totals	14	17	31	319	379	698

TABLE No. 8—PENETANGUISHENE.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	1	2	3
Discharged, Recovered	.....	.....	.....
Discharged, Improved	.....	.....	.....
Discharged, Unimproved	.....	.....	.....
Died	.....	.....	.....
Returned to Hospital	.....	1	1
Absent on October 31st, 1917	1	1	2

TABLE No. 9—PENETANGUISHENE.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died During Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	1	1	2
Influenza	.....	.....	.....	.....	1	1
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	1	1	1	4	5
Septicæmia	.....	1	1	1	2	3
Dysentery	.....	.....	.....	.....	4	4
Syphilis	.....	.....	.....	.....	.....	.....
Tuberculosis	3	3	6	18	16	34
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	.....	.....	.....
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	1	2	3
Diseases of the Digestive System:—						
Mouth, Salivary Glands	.....	.....	.....	.....	.....	.....
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	1	1
Œsophagus	.....	.....	.....	.....	.....	.....
Diseases of the Intestines:—						
Diseases of the Liver	.....	1	1	1	3	4
" " Pancreas	.....	.....	.....	1	.....	1
" " Peritoneum	.....	.....	.....	.....	2	2
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....
" " Bronchi	.....	1	1	.....	3	3
" " Lungs	.....	1	1	11	7	18
" " Pleura	.....	.....	.....	1	.....	1
Diseases of the Circulatory System:						
Diseases of the Pericardium	.....	.....	.....	.....	.....	.....
" " Heart	.....	.....	.....	17	22	39
Arterio-sclerosis	3	.....	3	5	1	6
Aneurism	.....	.....	.....	.....	.....	.....
Diseases of the Blood and Ductless Glands:						
Anæmia	.....	.....	.....	1	1	2
Pernicious Anæmia	.....	.....	.....	1	2	3
Leukæmia	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	1	.....	1	1	1	2
Diseases of the Genito-Urinary System	.....	2	2	8	3	11
Carried Forward	7	10	17	69	76	145

TABLE No. 9—PENETANGUISHENE—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died During Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	7	10	17	69	76	145
Diseases of the Nervous System:—						
Diseases of the Nerves					1	1
" " Spinal Cord				1		1
" " Meninges				1		1
Organic Diseases of the Brain:— (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)				9	13	22
Functional Nervous Diseases (Paralysis Agitans, Chorea, Eclampsia, Hysteria)					2	2
Epilepsy				1	5	6
Mental Diseases:—						
Exhaustion of Acute Mental Disease				1	2	3
" " Chronic "					1	1
General Paresis	1		1	5	4	9
Intoxications:—						
Alcoholism						
Morphinism				1		1
Metallic Poisoning						
Heat Stroke						
Debility of Old Age	1	1	2	12	15	27
Accident					1	1
Suicide				1		1
Surgical Diseases					3	3
Gynæcological Diseases						
Malignant New Growths or Cancer					6	6
Totals	9	11	20	101	129	230

TABLE No. 10—PENETANGUISHENE.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	....	....	....	....	....	....	....
(b) Infection Delirium	....	....	....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	....	....	....	....	....	2	2
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	....	....	....	....	....	....	....	....	....
(c) Neurasthenia	....	....	....	....	....	....	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	....	....	....	....	....	....	....	....	....
(b) Chronic "	....	....	....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	....	....	....	....	....	....	....	....	....
(b) Delirium Tremens	....	....	....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	....	....	....	....	....	....	...
(e) Alcoholic Hallucinatory Dementia	....	....	....	....	....	....	....	....	....
(f) " Paranoia	....	....	....	....	....	....	....	....	....
(g) " Paresis	....	....	....	....	....	....	....	....	....
(h) Morphinism	....	....	....	....	....	....	....	....	....
(i) Cocainism	....	....	....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	....	....	....	....	....	....	....
(b) Cretinism	....	....	....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	....	4	4	....	....	....	....	....	....
(b) Catatonic	2	4	6	....	....	....	....	....	....
(c) Paranoid	2	....	2	....	....	....	....	....	....
General Paresis	....	....	....	....	....	....	2	....	2
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	....	....	....	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	....	....	....	....	....	....	....	....
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	....	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	....	2	2	....	....	....	....	1	1
(b) Pre-Senile Delusional Psychoses	....	....	....	....	....	....	....	....	....
(c) Senile Dementia	....	....	....	....	....	....	....	2	2
Manic Depressive Psychoses:—									
(a) Manic States	2	....	2	....	....	....	....	....	....
(b) Depressed States	3	....	3	....	....	....	....	1	1
(c) Mixed States	1	....	1	....	....	....	....	....	....
Carried forward	10	10	20	....	....	....	2	6	8

TABLE No. 10—PENETANGUISHENE.—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	8	10	20	....	....	....	2	6	8
Paranoia	....	....	....	....	....	....	1	2	3
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	....	....	....	....	....	....	....	....	....
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	2	3	5	....	....	....	1	1	2
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	2	4	6	....	....	....	5	2	7
Not Insane	....	....	....	....	....	....	....	....	....
Totals	14	17	31	....	....	....	9	11	20

TABLE No. 11—PENETANGUISHENE.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	.....	.....	.....	.....	.....	.....
From 1 to 2 months	1	1	.....	.....	.....	.....
" 2 " 3 "	.....	.....	.....	.....	.....	.....
" 3 " 4 "	.....	.....	.....	.....	.....	.....
" 4 " 5 "	1	1	.....	.....	.....	.....
" 5 " 6 "	.....	.....	.....	.....	.....	.....
" 6 " 9 "	.....	.....	.....	.....	.....	.....
" 9 " 12 "	5	32	.....	.....	.....	.....
" 12 " 18 "	6	15	.....	.....	.....	.....
" 18 months to 2 years	1	16	.....	.....	.....	2
" 2 to 3 years	2	18	.....	.....	.....	2
" 3 " 4 "	2	52	.....	.....	.....	1
" 4 " 5 "	3	41	.....	.....	.....	1
" 5 " 10 "	4	51	.....	.....	.....	5
" 10 " 15 "	2	37	.....	.....	.....	9
" 15 " 20 "	.....	48	.....	.....	.....	.....
" 20 years and upwards	4	57	.....	.....	.....	.....
Totals	31	369	.....	.....	.....	20

HOSPITAL FOR THE INSANE, TORONTO.

NOVEMBER, 1ST, 1917.

W. W. DUNLOP, ESQ.,

Inspector of Hospitals, Parliament Buildings,
Toronto, Ont.

SIR,—In accordance with your request I have the honour to submit the seventy-seventh annual report of this Hospital for the year ending October 31st, 1917.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	426	426	852			
In Residence October 31st, 1916	.....	.....	.....	440	580	1,020
Admitted during year 1917 :						
By Warrant	87	10	97			
By Certificate	222	197	412	309	207	516
Total number under treatment during year	.....	.....	.....	749	787	1,536
Discharges during year, minus deports :—						
As recovered	49	60	109			
" improved	44	54	98			
" unimproved	2	6	8			
" not insane	.....	2	2			
Total number discharged during year	95	122	217			
Died	91	41	132			
Deported	.....	1	1			
Eloped	7	3	10			
Transferred	5	14	19	198	181	379
Remaining in Hospital Oct. 31st, 1917	.....	.....	.....	551	606	1,157

During the past year there has been no decrease in the number of admissions to this Hospital, but an increase of over one hundred as the figures above show. Among these admissions were a number of men who had been overseas on military duty, but the majority of them had never been in France. Upon the opening of the mental hospital in Newmarket for returned soldiers seven of the remaining military patients were transferred to that institution. It was deemed advisable, wisely we believe, by the military authorities to have the soldier patients in a separate hospital.

For about three or four years we had been looking forward to moving our patients from Queen Street to the new Mental Hospital at Whitby, but when this Hospital was nearing completion it presented so many admirable features that it was taken over by the Military Hospital Commission. For these years our Hospital here was neglected in the matter of repairs and renovation. The King Street branch required such radical treatment that the patients had to be removed temporarily to Queen Street, and by an addition of one of our cottages and the

alteration of a well constructed building for industrial purposes, these were converted into very suitable quarters for our over plus of patients. The heating and plumbing in Queen Street was mostly taken out and renewed. Our wards are being painted. The work on these wards was almost entirely done by our patients as it was impossible to secure help, and the employment was advantageous to the patients.

There have been few changes on the staff. Though the numbers are greatly reduced there has been a faithful effort put forward by the staff that the patients might not suffer from this reduction.

In writing this report one is reminded so often of our former Inspector, the late Mr. E. R. Rogers. His helpful hand, kindly advice, and constant interest in the welfare of the patients were all so familiar to us, and his death has removed a close friend of the work.

Thanking you, Sir, for your ever ready advice and help,

I have the honour to remain,

Your obedient servant,

J. M. Forster,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, TORONTO, FOR THE YEAR ENDING OCTOBER 31st, 1917

TABLE No. 1—TORONTO.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	426	426	852			
In Residence October 31st, 1916	.....	.....	.....	440	580	1,020
Admitted during year 1917:—						
By Warrant	87	10	97			
By Medical Certificate	222	197	412	309	207	516
Total number under treatment during year	.....	.....	.....	749	787	1,536
Discharges during year, minus deports:—						
As recovered	49	60	109			
" improved	44	54	98			
" unimproved	2	6	8			
" not insane	.....	2	2			
Total number discharged during year	95	122	217			
Died	91	41	132			
Deported	.....	1	1			
Eloped	7	3	10			
Transferred	5	14	19	198	181	379
Remaining in Hospital October 31st, 1917	.....	.....	.....	551	606	1,157
Total number admitted since opening of Hospital	.....	.....	.....	6,900	6,537	13,437
Total number discharged since opening of Hospital	3,346	3,519	6,865			
Total number died since opening of Hospital	1,895	1,500	3,395			
Total number deported since opening of Hospital	113	48	161			
Total number eloped since opening of Hospital	164	29	193			
Total number transferred since opening of Hospital	831	835	1,666	6,349	5,931	12,280
Total remaining in Hospital October 31st, 1917	.....	.....	.....	551	606	1,157
Daily average population	544	559	1,103			
Collective days' stay of all patients in residence during year	198,560	204,035	402,595			
Number of applications on file	6	4	10			

TABLE No. 2—TORONTO.

Showing Social State and Religion of Patients admitted during the year and since the opening of Hospital.

—	In residence.			Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	361	311	672	195	89	284	3,715	2,578	6,293
Married	153	221	374	102	90	192	3,069	3,742	6,811
Widowed	19	73	92	12	28	40	87	206	293
Divorced	.....	.....	.....	.....	.....	.....	1	1	2
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	18	1	19	.....	.....	.....	28	10	38
Totals	551	606	1,157	309	207	516	6,900	6,537	13,437
RELIGION.									
Baptists	10	22	32	11	9	20	189	208	397
Congregationalists	4	9	13	2	.....	2	65	87	152
Episcopalians	158	168	326	82	57	139	1,962	1,803	3,765
Methodists	94	112	207	49	42	91	1,257	1,295	2,552
Presbyterians	85	117	202	42	39	81	1,387	1,366	2,753
Roman Catholics	102	97	199	60	29	89	1,239	1,135	2,374
Other Denominations	64	58	122	38	24	62	539	486	1,025
Unascertained	34	23	56	25	7	32	262	157	419
Totals	551	606	1,157	309	207	516	6,900	6,537	13,437

TABLE No. 3—TORONTO.

Showing Nativity of Patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	309	207	516	6,900	6,537	13,437
Total born in Canada	154	98	252	3,032	3,027	6,059
Armenia	.....	.....	.....	1	.....	1
Assyria	.....	.....	.....	2	.....	2
Austria	9	.....	9	24	6	30
Australia	.....	.....	.....	2	.....	2
Belgium	.....	.....	.....	.....	.....	.....
Bulgaria	2	.....	2	8	.....	8
Central America	.....	.....	.....	.....	.....	.....
China	.....	.....	.....	4	.....	4
Denmark	.....	.....	.....	2	.....	2
England	74	47	121	1,371	1,166	2,537
France	1	.....	1	3	2	5
Finland	2	1	3	8	6	14
Galicia	.....	.....	.....	.....	.....	.....
Germany	.....	1	1	12	9	21
Greece	.....	.....	.....	3	.....	3
Holland	1	3	4	2	3	5
Hungary	.....	.....	.....	.....	.....	.....
Ireland	16	13	29	1,210	1,245	2,455
Italy	3	.....	3	26	4	30
Japan	.....	.....	.....	.....	.....	.....
Macedonia	1	.....	1	9	.....	9
Other British Possessions	1	1	2	7	9	16
Norway	.....	.....	.....	1	2	3
Roumania	.....	1	1	2	5	7
Russia	18	9	27	62	47	109
Scotland	13	16	29	627	559	1,186
South America	.....	.....	.....	1	.....	1
Spain	.....	.....	.....	1	.....	1
Sweden	.....	.....	.....	1	3	4
Turkey	2	.....	2	6	1	7
United States	8	5	13	226	246	472
West Indies	.....	1	1	4	5	9
Unascertained	4	11	15	243	192	435
Totals	309	207	516	6,900	6,537	13,437

TABLE No. 4—TORONTO.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	3	1	4	271	16	287
Commercial:— Bankers, Merchants, Accountants, Clerks Salesmen, Stenographers, Typewriters, etc.	24	11	35	825	115	940
Agricultural and Pastoral:— Farmers, Gardeners Stock Men, etc.	19	.....	19	1,471	.....	1,471
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	42	.....	42	723	2	725
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	28	10	38	588	336	924
Domestic Service:— Waiters, Cooks, Servants, etc.	.....	38	38	85	1,464	1,549
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses etc.	2	97	99	244	3,447	3,691
Miners, Marine Engineers, Railway Employees, Seamen, etc.	29	.....	29	200	2	202
Laborers	110	.....	110	1,820	.....	1,820
No Occupation	19	44	63	284	750	1,034
Unascertained	33	6	39	389	405	794
Totals	309	207	516	6,900	6,537	13,437

TABLE No. 5—TORONTO.

Showing the Counties and Districts from which Patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant Cases. Admitted during year.			Warrant Cases. Admitted since opening.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	....	....	....	14	18	32	....	....	....	6	1	7	1	4	5
Brant	....	....	....	49	60	109	....	....	....	2	3	5	...	1	1
Bruce	....	....	....	26	15	41	....	....	....	5	....	5	1	2	3
Carleton	....	1	1	81	66	147	....	....	....	12	2	14	1	...	1
Dufferin	....	....	....	8	10	18	....	....	....	3	1	4	1	1	2
Dundas	....	....	....	17	16	33	....	....	....	3	1	4	...	...	....
Durham	4	....	4	177	164	341	....	....	....	34	17	51	6	5	11
Elgin	....	....	....	33	25	58	....	....	....	1	....	1	1	1	2
Essex	....	....	....	18	16	34	....	....	....	2	3	5	1	...	1
Frontenac	1	....	1	105	75	180	....	....	....	23	13	36	...	1	1
Glengarry	1	....	1	31	21	52	1	....	1	5	2	7	1	...	1
Grenville	....	....	....	19	17	36	....	....	....	5	1	6	1	...	1
Grey	....	1	1	120	96	216	....	....	....	58	17	75	1	...	1
Haldimand	....	....	....	26	26	52	....	....	....	5	1	6	...	...	....
Halton	....	....	....	83	66	149	....	....	....	6	2	8	...	2	2
Hastings	....	....	....	116	89	205	....	....	....	53	27	80	2	...	2
Huron	....	....	....	67	60	127	....	....	....	4	1	5	3	3	6
Kent	....	....	....	26	23	49	....	....	....	6	2	8	...	...	....
Lambton	....	....	....	30	24	54	....	....	....	3	2	5	...	...	....
Lanark	....	....	....	51	43	94	....	....	....	10	6	16	...	...	....
Leeds	....	...	....	41	36	77	....	....	....	6	4	10	1	...	1
Lennox and Addington	....	....	....	27	21	48	....	....	....	12	1	13	2	...	2
Lincoln	....	....	....	101	85	186	....	....	....	14	10	24	...	1	1
Middlesex	....	....	....	83	79	162	....	....	....	1	....	1	1	...	1
Muskoka District	....	....	....	21	20	41	....	....	....	3	2	5	...	2	2
Nipissing District	....	....	....	7	6	13	....	....	....	1	2	3	1	...	1
Norfolk	....	....	....	19	21	40	....	....	....	....	....	....	....	....	....
Northumberland	1	....	1	150	142	292	1	....	1	30	11	41	4	5	9
Ontario	4	1	5	204	183	387	....	....	....	65	30	95	8	7	15
Oxford	1	....	1	40	40	80	....	....	....	4	5	9	3	...	3
Parry Sound District	....	....	....	1	4	5	....	....	....	....	....	....	1	3	4
Peel	1	1	2	131	130	261	....	....	....	31	10	41	1	5	6
Perth	....	....	....	50	50	100	....	....	....	7	....	7	...	...	....
Peterborough	2	....	2	105	99	204	....	....	....	44	15	59	3	1	4
Prescott	....	....	....	21	22	43	....	....	....	3	1	4	...	...	....
Prince Edward	....	....	....	26	30	56	....	....	....	3	....	3	...	1	1
Rainy River District	....	....	....	5	4	9	....	....	....	4	2	6	...	...	....
Renfrew	....	....	....	4	11	15	....	....	....	....	....	....	1	...	1
Russell	....	....	....	12	10	22	....	....	....	2	1	3	...	...	....
Simcoe	3	....	3	80	70	150	1	....	1	27	12	39	6	7	13
Stormont	1	....	1	50	35	85	....	....	....	6	3	9	...	1	1
Thunder Bay District	....	....	....	2	3	5	....	....	....	....	....	....	2	...	2
Victoria	1	....	1	144	146	290	1	....	1	53	26	79	4	2	6
Waterloo	1	....	1	56	55	111	....	....	....	10	4	14	4	3	7
Welland	1	....	1	52	51	103	1	....	1	7	4	11	2	...	2
Wellington	1	....	1	152	152	304	....	....	....	14	4	18	2	3	5
Wentworth	....	....	....	237	211	448	....	....	....	39	9	48	3	2	5
York	286	203	489	3,829	3,844	7,673	82	10	92	1,339	695	2,034	480	541	1021
Unascertained	....	....	....	153	45	198	....	....	....	87	14	101	2	1	3
Manitoba	....	....	....	....	1	1	....	....	....	....	....	....	...	1	1
Totals	309	207	516	6,900	6,537	13,437	87	10	97	2,058	967	3,025	551	606	1157

TABLE No. 6—TORONTO.

Showing the assigned causes of insanity in the cases admitted during year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	.....	.....	.....	.....	.....	.....	.....
Mental Strain, Worry and Overwork (not included in above)	.....	.....	.....	.....	.....	.....	.....
Religious Excitement	.....	.....	.....	.....	.....	.....	.....
Love affairs, including seduction	.....	.....	.....	.....	.....	.....	.....
Fright and Nervous Shock	.....	.....	.....	.....	.....	.....	.....
PHYSICAL.							
Alcoholism	17	.....	17	.....	.....	.....	.....
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	25	2	27	.....	.....	.....	.....
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	.....	.....	.....	.....	.....	.....	.....
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	.....	.....	.....	.....	.....	.....
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	.....	.....	.....	.....	.....	.....
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	6	4	10	.....	.....	.....	.....
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	15	29	44	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	1	.....	1	.....	.....	.....	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	.....	.....	.....	.....	.....	.....	.....
HEREDITARY.							
Congenital Defect	15	16	31	12	16	28	.....
Unascertained	230	154	384	297	191	488	.....
Not Insane	.....	2	2	.....	.....	.....	.....
Totals	309	207	516	309	207	516	.....

TABLE No. 7—TORONTO.

Showing hereditary tendency to insanity in patients admitted during the year.

—	Admitted during year.		
	Male.	Female.	Total.
Paternal Branch	4	5	9
Maternal Branch	5	8	13
Paternal and Maternal Branches	2	1	3
Collateral Branches	.....	2	2
No Hereditary Tendency	.....	.....	.....
Unascertained	298	191	489
Totals	309	207	516

TABLE No. 8—TORONTO.

Showing summary of Probational discharges during the year.

—	Male.	Female.	Total.
Number granted discharge	97	153	250
Discharged, recovered	30	49	79
" improved	21	28	49
" unimproved	.....	.....	.....
Died	.....	.....	.....
Returned to Hospital	26	42	68
Absent on probation on Oct. 31st, 1917	20	34	54

TABLE No. 9—TORONTO.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	1	2	3
Influenza	.....	.....	.....	2	4	6
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	1	1
Erysipelas	.....	.....	.....	2	4	6
Septicæmia	2	1	3	6	12	18
Dysentery	.....	.....	.....	6	4	10
Syphilis	.....	.....	.....	2	1	3
Tuberculosis	8	1	9	61	85	146
Toxemia	.....	.....	.....	1	1	2
Carbuncle	.....	.....	.....	1	.....	1
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	.....	.....	.....
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	1	2	3
Stomach	.....	.....	.....	.....	1	1
Diseases of the Digestive System:—						
Mouth, salivary glands	.....	.....	.....	.....	.....	.....
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	1	1	2	2	1	3
Gastric Ulcer	.....	.....	.....	.....	1	1
Diseases of the Intestines:—						
Diseases of the Liver	1	1	2	10	12	22
" Pancreas	.....	.....	.....	3	2	5
" Peritoneum	1	.....	1	5	7	12
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....
" Bronchi	.....	.....	.....	3	5	8
" Lungs	.....	.....	.....	32	37	69
" Pleura	2	3	5	11	10	21
Diseases of the Circulatory System:—						
Diseases of the Pericardium	.....	.....	.....	1	2	3
" Heart	3	4	7	61	59	120
Arterio-sclerosis	1	1	2	23	9	32
Aneurism	.....	.....	.....	1	.....	1
Diseases of the Blood and Ductless Glands:						
Anæmia	2	.....	2	3	2	5
Pernicious Anæmia	.....	1	1	3	1	4
Leucæmia	1	.....	1	1	.....	1
Exophthalmic Goitre	.....	.....	.....	.....	1	1
Diseases of the Genito-Urinary System	4	1	5	21	14	35
Carried forward	26	14	40	263	280	543

TABLE No. 9—TORONTO—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	26	14	40	263	280	543
Diseases of the Nervous System :—						
Diseases of the Nerves	.....	.....	.....	2	1	3
" Spinal Cord	.....	.....	.....	2	1	3
" Meninges	.....	.....	.....	1	.....	1
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	2	1	3	23	16	39
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	1	.....	1	2	.....	2
Epilepsy	6	4	10	34	32	66
Mental Disease :—						
Exhaustion of Acute Mental Disease	2	2	4	26	45	71
" Chronic "	.....	.....	.....	8	6	14
General Paresis	38	3	41	246	30	276
Pellegra	.....	1	1	.....	4	4
Intoxications :—						
Alcoholism	1	.....	1	3	.....	3
Morphinism	.....	.....	.....	.....	.....	.....
Metallic Poisoning	.....	.....	.....	2	.....	2
Heat Stroke	.....	.....	.....	.....	.....	.....
Debility of Old Age	14	16	30	106	107	213
Accident	.....	.....	.....	1	3	4
Suicide	.....	.....	.....	9	5	14
Surgical Diseases	1	.....	1	1	.....	1
Gynæcological Diseases	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer	.....	.....	.....	7	12	19
Totals	91	41	132	736	542	1,278
Unclassified	.....	.....	.....	1,159	958	2,117
				1,895	1,500	3,395

TABLE No. 10—TORONTO.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	.....	1	....	1	....	....	....
(b) Infection Delirium	1	....	1	....	2	2	....	....	....
(c) Post Infection Psychoses	....	....	.....	....	....	....	1	....	1
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	4	4	1	1	2	1	5	6
(b) Acute Confusional Psychoses	1	1	2	1	1	2	....	....	....
(c) Neurasthenia	....	....	.....	1	....	1	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	16	2	18	7	1	8	1	....	1
(b) Chronic "	....	....	.....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	....	....	.....	....	....	....	....	....	....
(b) Delirium Tremens	1	....	1	....	....	....	....	....	....
(c) Korsakow's Psychoses	3	....	3	....	....	....	1	....	1
(d) Acute Alcoholic Hallucinosis	....	....	.....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	.....	1	....	1	....	....	....
(f) " Paranoia	....	....	.....	1	....	1	....	....	....
(g) " Paresis	....	....	.....	....	....	....	....	....	....
(h) Morphinism	1	....	1	1	1	2	....	....	....
(i) Cocainism	....	....	.....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	.....	....	....	....	....	....	....
(b) Cretinism	....	....	.....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	63	32	95	2	9	11	6	1	7
(b) Catatonic	79	32	111	19	25	44	12	4	16
(c) Paranoid	34	21	55	6	11	17	3	1	4
General Paresis	25	2	27	3	1	4	38	3	41
Organic Dementias:—									
(a) Cerebral Sclerosis	2	....	2	....	....	....	....	....	....
(b) Huntingdon's Chorea	2	....	2	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	.....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	.....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	.....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	3	2	5	3	....	3	1	....	1
(g) Cerebral Tumor, Abscess, Hæmorrhage	....	....	.....	....	....	....	1	1	2
Pellegra	....	....	.....	....	....	....	....	1	1
Involution Psychoses:—									
(a) Melancholia	14	13	27	3	8	11	2	2	4
(b) Pre-senile Delusional Psychoses	....	....	.....	....	....	....	....	....	....
(c) Senile Dementia	17	29	46	3	3	6	14	17	31
Manic Depressive Psychoses:—									
(a) Manic States	22	42	64	23	33	56	1	1	2
(b) Depressed States	11	14	25	9	19	28	1	....	1
(c) Mixed States	....	....	.....	....	....	....	....	....	....
Paranoia	....	....	.....	....	....	....	....	....	....
Carried forward	294	195	489	85	115	200	83	36	119

TABLE No. 10—TORONTO—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Diseases.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought forward	394	195	489	85	115	200	83	36	119
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	6	4	10	7	3	10	6	5	11
(b) Hysterical Psychoses	....	1	1	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	.....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	9	5	14	2	3	5	2	....	2
(b) Idiocy	....	....	.....	....	....	....	....	....	....
Not Diagnosed	....	....	.....	1	....	1	....	....	....
Not Insane	....	2	2	....	2	2	....	....	....
Total	309	207	516	95	*123	*218	91	41	132

* Deport included.

TABLE No. 11—TORONTO.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1916.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	51	16	4	13	4	33
From 1 to 2 months	29	22	7	6	.....	5
" 2 " 3 "	25	19	3	6	.....	11
" 3 " 4 "	14	16	18	8	.....	7
" 4 " 5 "	29	25	15	11	1	4
" 5 " 6 "	57	25	18	6	1	9
" 6 " 9 "	39	50	20	17	.....	5
" 9 " 12 "	26	45	5	5	.....	7
" 12 " 18 "	9	61	9	5	1	7
" 18 months to 2 years.	21	49	6	6	.....	3
" 2 to 3 years	64	94	2	5	.....	10
" 3 " 4 "	38	87	.....	4	.....	2
" 4 " 5 "	30	67	1	3	.....	2
" 5 " 10 "	36	212	1	3	1	12
" 10 " 15 "	20	129	.....	1	.....	4
" 15 " 20 "	8	99	.....	.....	.....	.....
" 20 years and upwards	20	141	.....	.....	.....	11
Not insane	.....	.....	2	.....	.....	.....
Totals	516	1,157	2 109	* 99	8	132

* 1 Deport included.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOMEWOOD SANITARIUM, GUELPH, FOR THE YEAR ENDING OCTOBER 31st, 1917.

INSANE BRANCH.

TABLE No. 1.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	70	80	150			
In Residence October 31st, 1916	.....	.....	.....	18	48	66
Admitted during year 1917:						
By Warrant	.....	.....	.....	.....	.....	.....
By Medical Certificate	47	43	90	47	43	90
Total number under treatment during year	.....	.....	.....	65	91	156
Discharges during year:						
As recovered	5	12	17			
" improved	16	17	33			
" unimproved	1	6	7			
" not insane	.....	.....	.....			
Total number discharged during year	22	35	57			
Died	9	4	13			
Deported	.....	.....	.....			
Eloped	1	.....	1			
Transferred	6	5	11	38	44	82
Remaining in Hospital October 31st, 1917	.....	.....	.....	27	47	74
Total number admitted since opening of Hospital	.....	.....	.....	619	618	1,237
Total number discharged since opening of Hospital	431	451	882			
Total number died since opening of Hospital	86	49	135			
Total number deported since opening of Hospital	.....	.....	.....			
Total number eloped since opening of Hospital	9	2	11			
Total number transferred since opening of Hospital	66	69	135	592	571	1.163
Total remaining in Hospital October 31st, 1917	.....	.....	.....	27	47	74
Daily average population	.....	.....	.....			
Collective days' stay of all patients in residence during year	.....	.....	.....			
Number of applications on file	.....	.....	.....			

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOMEWOOD SANITARIUM, GUELPH, FOR THE YEAR ENDING OCTOBER 31st, 1917.

VOLUNTARY BRANCH.

TABLE No. 1.

Showing movements of patients in the Hospital for the official year ending October 31st, 1917.

—	Male.	Female.	Total.	Male.	Female	Total.
Capacity of Hospital	70	80	150			
In Residence October 31st, 1916	.....	.....	.....	30	34	64
Admitted during year 1917:						
By Warrant	.....	.....	.....	.....	.....	.....
By Medical Certificate	82	60	142	82	60	142
Total number under treatment during year	.....	.....	.....	112	94	206
Discharges during year:						
As recovered	37	6	43			
" improved	36	32	68			
" unimproved	8	13	21			
" not insane	.....	.....	.....			
Total number discharged during year	81	51	132			
Died	4	3	7			
Deported	.....	.....	.....			
Eloped	.....	.....	.....			
Transferred	.....	2	2	85	56	141
Remaining in Hospital October 31st, 1917	.....	.....	.....	27	38	65
Total number admitted since opening of Hospital	.....	.....	.....	1,708	703	2,411
Total number discharged since opening of Hospital	1,572	619	2,191			
Total number died since opening of Hospital	49	21	70			
Total number deported since opening of Hospital	.....	.....	.....			
Total number eloped since opening of Hospital	36	3	39			
Total number transferred since opening of Hospital	24	22	46	1,681	665	2,346
Total remaining in Hospital October 31st, 1917	.....	.....	.....	27	38	65
Daily average population	.....	.....	.....			
Collective days' stay of all patients in residence during year	.....	.....	.....			
Number of applications on file	.....	.....	.....			

PART II

OF THE

FIFTIETH ANNUAL REPORT

OF THE

Inspectors of Prisons and Public Charities of the Province of Ontario

CONTAINING REPORT ON THE

Hospital for Feeble-Minded, Orillia

AND THE

Hospital for Epileptics, Woodstock

BEING FOR THE YEAR ENDING 31st OCTOBER

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed and Published by A. T. Wilgress, Printer to the King's Most Excellent Majesty

1918

Printed by
WILLIAM BRIGGS,
Corner Queen & John Sts.,
Toronto.

PARLIAMENT BUILDINGS.

TORONTO, January 15th, 1918.

To His Honour SIR JOHN STRATHEARN HENDRIE, C.V.O.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fiftieth Annual Report upon the Hospitals for the Feeble-Minded and Epileptic of Ontario, being for the official year ending 31st October, 1917.

I have the honour to be,

Your Honour's most obedient servant,

WM. DAVID McPHERSON,

Provincial Secretary.

Office of the

Inspector of Prisons and Public Charities, Ontario,

Parliament Buildings, Toronto, January 15th, 1918.

Sir,—I have the honour to transmit herewith, to be presented to His Honour the Lieutenant-Governor, the Fiftieth Annual Report upon the Hospitals for the Feeble-Minded and Epileptics of Ontario, being for the official year ending 31st October, 1917.

I have the honour to be, Sir,

Your obedient servant,

W. W. Dunlop,

Inspector.

The Honourable William David McPherson, K.C., M.P.P.,
Provincial Secretary of the Province of Ontario,
Toronto.

CONTENTS.

PAGE

Introductory remarks of Mr. W. W. Dunlop 7

List of Hospital Tables:—

Table No. 1, showing movements of entire Hospital population 8

Table No. 2—Social state and religion of patients admitted during the year, and since opening of Hospitals 9

Table No. 3, showing nativity of patients 10

Table No. 4, showing occupations of patients admitted into the Hospitals during the year and since the opening of the Hospitals 11

Table No. 5, showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospitals 12

Table No. 6, showing (*a*) the length of time the patients received into the Hospitals during the year had been insane prior to their admission; (*b*) the length of residence of patients remaining in the Hospitals on the 31st of October, 1911; (*c*) the periods that patients were under treatment who were discharged recovered during the year; (*d*) the periods that patients were under treatment who were discharged improved during the year; (*e*) the periods that patients were under treatment who were discharged unimproved during the year; (*f*) the length of Hospital residence of the patients who died during the year 13

Table No. 7, showing the general movements and result of treatment of patients in the Hospital for Feeble-Minded, Orillia, for each of the thirty-six years from January 1st, 1879, to October 31st, 1917 14

Table No. 8, showing the general movement and result of treatment of patients in the Hospital for Epileptics, Woodstock, during each of the years from April 1st, 1906, to October 31st, 1917 15

Table No. 9—Deaths 16

Table No. 10, showing the number of beds in each Hospital; number in residence; number of vacancies, over-population, and applications on fyle at close of the official year 16

Table No. 11, showing the number of officers and employees in each and all of the Hospitals, classified according to the duties performed 17

Table No. 12—Statement of revenue 18

Table No. 13, showing expenditure under estimate headings 18

Notes on per capita statement 19

Table No. 14—Comparative statement of expenditure per capita cost per day 20, 21, 22, 23, 24, 25

APPENDIX.

Report of J. P. Downey, Superintendent of the Hospital for Feeble-Minded, Orillia 28-31

Statistical tables 32-41

Report of Dr. J. J. Williams, Superintendent of the Hospital for Epileptics, Woodstock 42-43

Statistical tables 44-53

HOSPITALS FOR FEEBLE-MINDED AND EPILEPTICS.

On the 31st October, 1917, there were in the Hospitals for Feeble-Minded and Epileptics, 1,203 patients divided as follows:

Orillia.			Woodstock.		
Male.	Female.	Total.	Male.	Female.	Total.
443	549	992	101	110	211

an increase in the population over 1916 of 167; included in this was a transfer of 150 patients from Whitby Hospital.

Revenue.

The amount collected from paying patients for the year ending October 31st, 1917, was $32,360.47; from farm and miscellaneous, $6,660.76, making a total of $39,021.23. An increase over the year 1916, of $6,346.40.

Orillia: During the year a new cottage for boys was opened, a laundry building completed and general improvements made on all buildings.

Woodstock: The buildings have all been painted and generally improved. The grounds have been greatly improved and the returns from the farm were very satisfactory.

W. W. Dunlop,

Inspector.

TABLE No. 1.

Showing movements of patients in the Hospital for the year ending October 31st, 1917.

	Orillia Hospital.			Woodstock Hospital.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	550	550	1,100	104	104	208	654	654	1,308
In Residence, Oct. 31st, 1916	432	396	828	101	105	206	533	501	1,034
Admitted during year 1917:									
By Warrant	3	2	5	.....	.....	.....	3	2	5
By Medical Certificate	44	32	76	27	16	43	71	48	119
By transfers	.....	150	150	.....	.....	.....	.....	150	150
Total number under treatment during year	479	580	1,059	128	121	249	607	701	1,308
Discharges during year:									
As recovered	.....	.....	.....	.....	.....	.....	.....	.....	.....
As improved	7	3	10	4	3	7	11	6	17
As unimproved	.....	2	2	4	1	5	4	3	7
As not insane	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total number discharged during year	9	3	12	8	4	12	17	7	24
Died	24	25	49	19	7	26	43	32	75
Deported	.....	1	1	.....	.....	.....	.....	1	1
Eloped	1	.....	1	.....	.....	.....	1	.....	1
Transferred	2	2	4	.....	.....	.....	2	2	4
Total number admitted since opening of Hospital	1,425	1,375	2,800	296	243	539	1,721	1,618	3,339
Total number discharged since opening of Hospital	147	97	244	114	77	191	261	174	435
Total number died since opening of Hospital	773	698	1,471	77	53	130	850	751	1,601
Total number deported since opening of Hospital	2	1	3	.....	.....	.....	2	1	3
Total number eloped since opening of Hospital	12	.....	12	.....	.....	.....	12	.....	12
Total number transferred since opening of Hospital	48	30	78	4	3	7	52	33	85
Total remaining in Hospital, October 31st, 1917	443	549	992	101	110	211	544	659	1,203
Number of applications on file	.....	.....	565	20	17	37	.....	.....	602
Daily average population	432	507	939	101	107	208	533	614	1,147
Collective days' stay of all patients in residence during year	157,863	185,398	343,261	37,085	39,141	76,226	194,948	224,639	419,587

TABLE No. 2.

Showing social state and religion of patients admitted during the year and since opening of Hospitals.

——	Admissions of Year.	In Residence.	Admissions since opening.
SOCIAL STATE.			
Single	203	1,100	3,144
Married	59	89	178
Widowed	12	14	15
Divorced	.....	.....	.....
Separated	.....	.....	.....
Unascertained	.....	.....	2
Totals	274	1,203	3,339
RELIGION.			
Baptists	10	59	151
Congregationalists	.....	3	8
Church of England	77	255	690
Methodists	67	268	856
Presbyterians	44	236	620
Roman Catholics	46	181	515
Other Denominations	10	97	213
Unascertained	20	104	286
Totals	274	1,203	3,339

TABLE No. 3.

Showing Nativity of Patients admitted during the year and since opening of Hospitals.

Nativity.	Admissions of Year.			Admissions since Opening.		
	Orillia Hospital.	Woodstock Hospital.	Total.	Orillia Hospital.	Woodstock Hospital.	Total.
Total Admissions	231	43	274	2,800	539	3,339
Total born in Canada	172	34	206	2,296	436	2,732
Armenia						
Assyria						
Austria		1	1	5	1	6
Australia						
Belgium						
Bulgaria						
Central America						
China						
Denmark						
England	31	6	37	177	62	239
France	1		1	5		5
Finland						
Galicia						
Germany	2		2	21	3	24
Greece						
Holland						
Hungary						
Ireland	9	1	10	102	13	115
Italy						
Japan						
Macedonia						
Other British Possessions	1		1	6		6
Norway						
Roumania						
Russia		1	1	8	3	11
Scotland	6		6	64	11	75
South America						
Spain						
Sweden				5		5
Turkey						
United States	9		9	44	10	54
West Indies						
Unascertained				67		67
Totals	231	43	274	2,800	539	3,339

TABLE No. 4.

Showing the occupation of those admitted during the year and since the opening of the Hospital.

Occupation.	Admitted this Year.			Since Opening.		
	Orillia Hospital.	Woodstock Hospital.	Total.	Orillia Hospital.	Woodstock Hospital.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	1	1	2	1	5	6
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	.....	3	3	3	27	30
Agricultural and Pastoral: Farmers, Gardeners, Stock Men, etc.	.....	4	4	6	50	56
Mechanics at Outdoor Vocations:— Railway and Stationery Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	.....	2	2	2	17	19
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	17	4	21	17	36	53
Domestic Service:— Waiters, Cooks, Servants, etc	35	4	39	54	39	93
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc	61	5	66	63	77	140
Miners, Marine Engineers, Railway Employees, Seamen, etc	.....	.....	.....	1	1	2
Laborers	.....	9	9	22	78	100
No Occupation	117	10	128	2,631	201	2,832
Unascertained	.....	1	1	.....	8	8
Totals	231	43	274	2,800	539	3,339

TABLE No. 5.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospitals.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant cases.						Remaining in residence.		
							Admitted during year.			Admitted since opening.					
	Orillia Hospital.	Woodstock Hospital.	Total.	Orillia Hospital.	Woodstock Hospital.	Total.	Orillia Hospital.	Woodstock Hospital.	Total.	Orillia Hospital	Woodstock Hospital.	Total.	Orillia Hospital.	Woodstock Hospital.	Total.
Algoma District	2	....	2	31	4	35	....	....	....	4	2	6	8	3	11
Brant	2	2	4	41	15	56	....	....	....	1	....	1	11	5	16
Bruce	2	3	5	68	9	77	....	....	....	9	....	9	14	6	20
Carleton	5	4	9	94	14	108	....	....	....	11	....	11	38	6	44
Dufferin	....	....	....	17	9	26	....	....	....	2	....	2	3	3	6
Dundas	1	....	1	18	1	19	....	....	....	4	....	4	6	....	6
Durham	6	....	6	43	3	46	....	....	....	....	....	....	12	1	13
Elgin	5	2	7	33	11	44	....	....	....	4	1	5	10	7	17
Essex	3	1	4	56	6	62	....	....	....	5	....	5	14	1	15
Frontenac	6	1	7	95	4	99	....	....	....	29	....	29	24	....	24
Glengarry	....	....	....	17	....	17	....	....	....	4	....	4	5	....	5
Grenville	....	....	....	25	2	27	....	....	....	1	....	1	3	....	3
Grey	6	3	9	99	10	109	....	....	....	18	....	18	24	6	30
Haldimand	1	....	1	29	1	30	....	....	....	4	1	5	3	....	3
Halton	2	....	2	27	5	34	....	....	....	3	1	4	7	2	9
Hastings	5	1	6	70	9	79	....	....	....	12	....	12	12	2	14
Huron	1	1	2	63	10	73	....	....	....	9	....	9	9	6	15
Kent	1	....	1	56	7	63	....	....	....	5	....	5	5	5	10
Lambton	2	....	2	54	21	75	....	....	....	8	1	9	8	3	11
Lanark	1	....	1	18	3	21	....	....	....	5	....	5	5	2	7
Leeds	....	....	....	31	3	34	....	....	....	9	....	9	9	2	11
Lennox and Addington	1	....	1	40	1	41	....	....	....	9	....	9	9	....	9
Lincoln	3	....	3	24	8	32	....	....	....	4	1	5	4	4	8
Middlesex	4	1	5	102	38	140	....	....	....	7	1	8	7	13	20
Muskoka District	2	....	2	41	1	42	....	....	....	3	....	3	3	1	4
Nipissing District	6	....	6	28	5	33	....	....	....	4	....	4	4	1	5
Norfolk	....	....	....	26	7	33	....	....	....	10	....	10	10	1	11
Northumberland	9	1	10	43	5	48	....	....	....	8	....	8	8	1	9
Ontario	6	....	6	79	9	88	....	....	....	7	....	7	7	3	10
Oxford	....	3	3	63	28	91	....	....	....	8	....	8	8	7	15
Parry Sound District	4	....	4	10	1	11	1	....	1	2	....	3	2	1	3
Peel	3	....	3	37	1	38	....	....	....	6	....	6	6	2	8
Perth	2	1	3	45	15	60	....	....	....	9	....	9	9	4	13
Peterborough	8	....	8	52	6	58	1	....	1	12	....	12	12	3	15
Prescott	....	....	....	16	....	16	....	....	....	9	....	9	9	....	9
Prince Edward	2	....	2	22	3	25	....	....	....	....	....	....	....	....	.....
Rainy River District	2	1	3	3	1	4	1	....	1	1	....	2	1	1	2
Renfrew	2	....	2	46	2	48	....	....	....	6	....	6	6	....	6
Russell	....	1	1	11	3	14	....	....	....	....	....	....	....	2	2
Simcoe	9	....	9	18	18	199	....	....	....	22	1	23	22	6	28
Stormont	....	....	....	21	7	27	....	....	....	11	....	11	11	4	15
Thunder Bay District	3	....	3	4	4	8	1	....	1	1	3	4	1	3	4
Victoria	5	....	5	43	11	54	....	....	....	6	1	7	7	5	12
Waterloo	....	1	1	50	16	66	....	....	....	2	2	4	2	3	5
Welland	1	....	1	20	4	24	....	....	....	1	1	2	1	2	3
Wellington	3	2	5	53	12	65	....	....	....	4	....	4	4	6	10
Wentworth	15	1	16	142	35	177	....	....	....	11	....	11	11	17	28
York	83	13	96	573	145	718	....	....	....	47	10	57	47	59	106
Unascertained	7	....	7	41	6	47	....	....	....	4	....	4	4	2	6
Temiskaming	....	....	....	.....	....	.....	1	....	1	2	....	2	21	....	21
Totals	231	43	274	2,800	539	3,339	5	....	5	364	26	390	992	211	1,203

TABLE No. 6.

Periods.	Alleged duration of attack prior to admission.	Length of residence of those remaining in Hospitals on Oct. 31st, 1917.		Periods of treatment of those who were discharged recovered during the year.		Periods of treatment of those who were discharged improved during the year.		Periods of treatment of those who were discharged unimproved during the year.		Periods of treatment of those who died during the year.	
	Woodstock Hospital.	Orillia Hospital.	Woodstock Hospital.	Orillia Hospital.	Woodstock Hospital.	Orillia Hospital.	Woodstock Hospital.	Orillia Hospital.	Woodstock Hospital.	Orillia Hospital.	Woodstock Hospital.
Under 1 month	.....	7	2	.....	.....	.....	.....	1	1	2	.....
From 1 to 2 months	.....	3	.....	.....	.....	1	1	.....	.....	1	2
" 2 " 3 "	.....	5	.....	.....	.....	.....	.....	.....	3	2	2
" 3 " 4 "	1	6	2	.....	.....	.....	1	.....	1	.....	1
" 4 " 5 "	1	8	2	.....	.....	.....	1	.....	.....	3	.....
" 5 " 6 "	1	10	7	.....	.....	1	.....	.....	.....	3	.....
" 6 " 9 "	1	14	1	.....	.....	3	1	2	.....	5	.....
" 9 " 12 "	1	160	15	.....	.....	.....	.....	.....	.....	1	.....
" 12 " 18 "	1	45	18	.....	.....	2	.....	.....	.....	.....	.....
" 18 months to 2 years	3	15	12	.....	.....	.....	.....	.....	.....	3	.....
" 2 to 3 years	3	36	15	.....	.....	2	2	.....	.....	1	1
" 3 " 4 "	4	49	21	.....	.....	1	.....	.....	.....	5	.....
" 4 " 5 "	5	47	15	.....	.....	.....	.....	.....	.....	2	3
" 5 " 10 "	6	159	88	.....	.....	.....	1	.....	.....	5	15
" 10 " 15 "	6	135	13	.....	.....	.....	.....	.....	.....	6	2
" 15 " 20 "	4	95	.....	.....	.....	.....	.....	.....	.....	4	.....
" 20 years and upwards	6	188	.....	.....	.....	.....	.....	.....	.....	6	.....
Totals	43	992	211	.....	.....	10	7	3	5	49	26

TABLE No. 7.

Showing the general movement and result of treatment of patients in the Hospital for Feeble-Minded, Orillia, during each of the thirty-eight years from the 1st January, 1879, to the 31st October, 1917.

	Average daily number of patients in residence.			Number of patients admitted each year.			Number of patients discharged improved and unimproved each year.			Number of patients who died in each year.			Percentage of deaths upon number residents.			Number of patients remaining in Hospital at the end of each year.		
	Male.	Female.	Total.	Male.	Female	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female	Total.	Male.	Female.	Total.
Average five years— 1879 to 1883	87	84	171	18	16	34	2	1	3	6	7	13	6.25	7.69	6.95	96	91	187
Average five years— 1884 to 1888	122	109	231	18	18	36	2	2	4	10	7	17	8.13	6.19	7.20	123	113	236
Average five years— 1889 to 1893	221	183	404	42	36	78	2	2	4	12	16	28	5.55	8.33	6.87	216	192	408
Average five years— 1894 to 1898	322	264	586	44	38	82	4	4	8	24	23	47	7.28	8.52	7.84	330	270	600
1899	353	295	648	39	43	82	3	6	9	29	28	57	8.12	9.33	8.67	357	300	657
1900	351	300	651	45	26	71	4	5	9	41	24	65	11.48	8.08	9.94	357	297	654
1901	354	300	654	33	22	55	8	1	9	32	16	48	9.12	5.29	7.36	350	302	652
1902	349	307	656	29	28	57	9	1	10	22	16	38	6.36	5.11	5.76	346	313	659
1903	348	324	672	30	39	69	4	3	7	24	7	31	6.89	2.05	4.49	348	342	690
Average five years	351	305	656	35	32	67	6	3	9	30	18	48	8.40	5.97	7.25	352	311	663
1904	350	350	700	39	43	82	3	2	5	23	18	41	6.37	4.94	5.65	361	364	725
1905	368	368	736	46	35	81	6	2	8	29	26	55	7.79	7.03	7.41	372	370	742
1906	375	377	752	43	40	83	5	4	9	40	22	62	10.64	5.71	8.15	376	385	761
1907	380	390	770	35	31	66	7	3	10	21	19	40	5.48	4.85	5.16	383	392	775
1908	384	390	774	36	28	64	5	2	7	22	31	53	5.65	8.01	6.83	389	387	776
Average five years	369	375	744	40	35	75	5	3	8	27	23	50	7.19	6.11	6.64	376	378	754
*1909	390	386	776	29	28	57	11	3	14	15	18	33	3.84	4.66	4.26	392	394	786
1910	384	383	787	30	18	48	5	7	12	20	16	36	5.07	4.17	4.58	397	389	786
1911	410	391	801	50	18	68	2	2	4	12	13	25	2.93	3.33	3.12	417	392	809
1912	412	400	812	19	29	48	1	2	3	17	17	34	4.12	4.25	4.18	415	402	817
1913	411	404	815	37	35	72	2	1	3	34	27	61	8.27	6.68	7.48	414	409	823
Average five years	402	393	795	33	26	59	4	3	7	20	18	38	4.85	4.62	4.72	407	397	804
1914	410	405	815	34	42	76	5	3	8	30	37	67	7.27	9.05	8.14	410	410	820
1915	418	408	826	34	15	49	.....	4	4	17	14	31	4.07	3.43	3.75	424	407	831
1916	426	398	824	49	33	82	1	4	5	34	39	73	7.98	9.80	8.86	432	396	828
1917	432	507	939	47	184	231	7	5	12	24	25	49	5.42	4.55	4.95	443	549	992

* Ten months ending October 31st, 1909.

TABLE No. 8.

Showing the general movement and result of treatment of patients in the Hospital for Epileptics, Woodstock, during each of the years from the 1st April, 1906, to the 31st October, 1917.

	Average daily number of patients in residence.			Number of patients admitted each year.			Number of patients recovered in each year.			Number of patients discharged improved and unimproved each year.			Number of patients who died in each year.			Percentage of recoveries upon admission.			Percentage of deaths upon number residents.			Number of patients remaining in Hospital at the end of each year.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1906 (Nine months)....	18	14	32	32	26	58	....	....	....	5	5	10	1	2	3	.....	.....	.....	3.85	10.53	6.67	26	19	45
1907.....	32	26	58	30	22	52	1	....	1	13	3	16	2	2	4	3.33	.0	1.92	5.26	5.71	5.48	38	35	73
1908.....	45	40	85	30	13	43	....	2	2	7	2	9	2	....	2	.0	15.38	4.65	3.39	.0	1.94	59	44	103
*1909.....	64	48	112	27	15	42	....	....	....	14	7	21	2	1	3	.....	.....	.....	3.39	2.27	2.68	70	51	121
1910.....	87	68	155	38	38	76	1	....	1	14	7	21	3	2	5	2.63	.0	1.32	3.45	2.94	3.22	90	78	168
1911.....	97	89	186	31	26	57	....	....	....	13	6	19	6	2	8	.....	.....	.....	6.18	2.25	4.30	102	96	198
1912.....	99	95	194	27	16	43	....	....	....	15	8	23	11	11	22	.....	.....	.....	10.78	11.46	11.11	103	93	196
1913.....	105	106	206	14	23	37	....	....	....	8	3	11	4	7	11	.....	.....	.....	3.84	6.60	5.34	105	106	211
1914.....	105	105	210	10	17	27	....	....	....	5	8	13	9	7	16	.....	.....	.....	8.57	6.60	7.58	101	108	209
1915.....	101	105	206	18	18	36	....	....	....	7	15	22	10	8	18	.....	.....	.....	9.90	7.71	8.74	102	103	205
1916.....	102	101	203	12	13	25	....	....	....	5	7	12	8	4	12	.....	.....	.....	7.84	3.96	5.91	101	105	206
1917.....	101	107	208	27	16	43	....	....	....	8	4	12	19	7	26	.....	.....	.....	18.80	6.37	12.8	101	110	211

*Ten months ending October 31st, 1909.

TABLE No. 9.

DEATHS IN HOSPITALS.

Hospital.	No. of deaths.	Daily average population.	Percentage of deaths to daily average population.
Orillia	49	939	5.22
Woodstock	26	208	12.50
Totals	75	1,147	6.54

TABLE No. 10.

The following table shows the number of beds in each of the Hospitals, number in residence, and applications on file at close of official year.

Asylums.	Number of beds			Number in residence on 31st October, 1917.			Number of vacancies.			Over population.			Applications on file.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Orillia	550	550	1,100	443	549	992	107	1	108	.....	.....	.....	306	259	565
Woodstock	104	104	208	101	110	211	3	.....	3	.....	6	6	20	17	37
Totals	654	654	1,308	544	659	1,203	110	1	111	.....	6	6	326	276	602

TABLE No. 11.

Showing the number of officers and employees in each and all of the Hospitals, classified according to the duties performed.

Occupation.	Orillia Hospital.	Woodstock Hospital.	Total.
Superintendents	1	1	2
Associate Physicians	3	1	4
Bursars	1	1	2
Stenographers	1	1	2
Storekeepers	1	.....	1
Matrons	.....	1	1
Assistant Matrons	1	.....	1
Cooks	4	5	9
Laundresses	2	1	3
Housemaids and Dairymaids	10	1	11
Seamstresses	4	1	5
Bakers	1	.....	1
Tailors and Shoemakers	2	.....	2
Laundryman	1	.....	1
Engineer and Assistants	2	1	3
Stokers	4	1	5
Bricklayers and Masons	1	.....	1
Carpenters	1	1	2
Painters	1	.....	1
Farmers	1	1	2
Farmers' Assistants	5	5	10
Gardeners	1	1	2
Chief Attendants (males)	1	1	2
Supervisors (males)	2	2	4
Attendants (males)	11	7	18
Attendants (females)	28	9	37
Teachers	3	.....	3
Totals	93	42	135

TABLE No. 12.

Statement of revenue from paying patients and from farm and miscellaneous sources for the year ending October 31st, 1917.

Hospital.	No. of paying patients.	From paying patients.	From farm and Miscellaneous.	Totals.
		$ c.	$ c.	$ c.
Orillia	172	14,487 59	2,417 21	16,904 80
Woodstock	168	17,872 88	4,243 55	22,116 43
Totals	340	32,360 47	6,660 76	39,021 23

TABLE No. 13.

Showing the expenditure on maintenance under the different headings of the estimates for the year ending October 31st, 1917.

Heading of Estimates.	Orillia Hospital.	Woodstock Hospital.
	$ c.	$ c.
Medicines	1,880 64	665 47
Groceries	50,523 40	14,991 58
Heat and Light	42,877 48	7,976 97
Clothing	13,949 11	572 34
Laundry	2,884 01	1,129 22
Repairs	8,997 54	1,943 32
Office	894 29	422 63
Farm	6,393 59	4,494 46
Miscellaneous	1,249 21	239 92
Total expenses	129,649 27	32,435 91
Salaries	37,694 73	18,545 89
Grand Totals	167,344 00	50,981 80

Notes on Per Capita Statement.

Attached hereto is a statement of the cost of maintenance per patient per day for the twelve months ending October 31st, 1917, in the ten hospitals mentioned, as compared with the year 1916, being based on actual consumption.

It follows out the order of the sub-divisions of appropriations voted by the Legislature, and is calculated to two places of decimals of a cent. The figures in black-faced type represent totals.

Invoices for all purchases, properly certified by the Bursar and the Storekeeper, as to accuracy and receipt of goods, are checked in the Department before being submitted to the Treasury for payment.

A system of Daily Requisitions for all supplies, such as provisions, is carried out and these requisitions are forwarded to the Department semi-weekly. In case of coal, the amount consumed on each shift is weighed and weekly report of consumption made by the engineer.

Under headings "Provisions" and "Clothing" is shown only consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included in the account "Employees' Meals and Uniforms" under the heading "Salaries."

Quarterly inventories of stock are taken at each Institution, and are checked with the ledger accounts of the Department.

Returns are made of all products of the Farm and Garden, as received, charges being made against the cost of maintenance, and the Farm and Garden given credit for the same; for this purpose a uniform price list is in use for all Institutions, regardless of size or fertility of farm. At the end of the year the value per patient per day of such products—fruits, vegetables, feed and fodder, meat and eggs—is deducted from the gross per capita cost and appears in the statement as "Farm Recoveries."

TABLE

Comparative Statement of Average Maintenance Cost per Capital

	Brockville.		Hamilton.		Kingston.	
	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
Days' residence of patients	284,371	277,297	465,283	468,437	208,321	206,429
Average number of patients	779.09	757.64	1,274.74	1,279.88	570.74	564.01
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
MEDICINES	.48	.54	.32	.30	.55	1.03
Medicines and Medical comforts	.48	.54	.32	.30	.55	1.03
PROVISIONS	15.49	13.05	18.48	15.60	17.32	14.96
Breakfast Foods and Cereals	.36	.24	.40	.26	.41	.29
Butter	2.30	2.12	2.92	2.58	2.66	2.61
Coffee and Tea	.40	.38	.50	.47	.33	.36
Eggs	.57	.39	.96	.83	.45	.38
Flour, Bread, etc	3.11	2.34	3.34	2.17	3.07	1.91
Fruit and Vegetables—Fresh	.51	.42	.63	.55	.70	.69
" " Canned and Dried	.82	.65	1.12	.62	.98	.83
Milk	1.20	1.57	1.28	1.53	1.31	1.73
Potatoes	.66	.55	1.19	1.15	1.02	.69
Salt, Spices, Pickles, etc	.11	.10	.07	.06	.13	.18
Sugar and Syrup	1.20	1.00	.85	.83	1.20	1.06
Unenumerated Groceries	.84	.89	1.07	1.17	1.03	.83
Butchers' Meat	3.04	1.97	3.74	2.85	3.45	2.72
Fish and Fowl	.37	.43	.41	.53	.58	.68
FUEL, LIGHT AND WATER	10.20	7.59	6.01	4.74	11.18	7.63
Coal and Wood	8.36	5.37	4.58	3.29	11.11	7.57
Electricity	.18	.64	.54	.47	.....	.....
Gas	.33	.41	.24	.26	.....	.....
Oil, Candles, Matches, etc	.11	.07	.01	.02	.07	.06
Water	1.22	1.10	.64	.70	.....	.....
CLOTHING	3.41	2.26	1.88	1.74	3.43	2.70
Clothing—Dry Goods	2.63	1.47	1.53	1.14	2.80	2.03
Boots, Shoes, etc	.78	.79	.35	.60	.63	.67
LAUNDRY AND CLEANING	.99	.82	.59	.59	.87	1.06
Brushes, Brooms and Mops	.15	.14	.11	.10	.21	.29
Miscellaneous Expenses	.29	.20	.15	.17	.20	.25
Soap	.55	.48	.33	.32	.46	.52
GENERAL REPAIRS	2.05	2.14	1.81	1.55	4.08	3.31
Furniture and Furnishings	1.32	1.58	1.26	1.18	2.95	2.41
Plant	.73	.56	.55	.37	1.13	.90
OFFICE EXPENSES	.47	.45	.32	.34	.37	.47
Miscellaneous Items	.14	.18	.14	.17	.15	.23
Postage	.19	.16	.10	.09	.12	.12
Telephone and Telegraph	.14	.11	.08	.08	.10	.12
SALARIES	17.66	16.32	12.44	12.04	19.43	18.95
Supt. and Physicians	1.78	1.76	1.30	1.39	2.09	2.59
Bursar and Assistants	1.55	1.43	1.44	1.24	1.96	1.95
Matron and Assistants	2.88	2.72	2.57	2.37	2.30	2.60
Engineer and Assistants	2.17	1.96	1.23	1.09	2.20	1.94
Artisans, not Domestic	1.04	.80	.76	.54	1.40	1.22
Teachers	.....	.....	.....	.....	.....	.....
Attendants and Nurses	8.25	7.65	5.07	5.27	9.27	8.59
Temporary Assistance	.02	.....	.07	.14	.21	.06

No. 14.

per Day for the Twelve Months ending 31st October, 1917.

London.		Mimico.		Orillia.		Penetang.		Toronto.		Woodstock.	
This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
425,667	416,844	237,583	238,598	343,158	300,303	133,417	133,113	360,249	368,109	76,411	75,726
1,116.21	1,138.92	650.91	651.91	940.16	820.50	365.39	363.70	986.99	1,005.76	209.35	206.90
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
.21	.32	.54	.50	.55	.48	.15	.24	.37	.37	.87	.83
.21	.32	.54	.50	.55	.48	.15	.24	.33	.37	.87	.83
15.36	13.41	15.56	11.93	11.82	10.98	12.15	11.00	17.96	14.38	16.03	14.26
.41	.24	.55	.28	.37	.22	.28	.20	.33	.19	.31	.21
2.59	2.51	2.72	2.31	1.91	2.53	2.21	2.09	2.80	2.51	3.21	2.99
.64	.69	.36	.38	.34	.32	.47	.57	.48	.49	.41	.38
.29	.29	.35	.21	.30	.30	.01	.02	.62	.57	.07	.06
2.86	1.94	2.98	1.98	3.40	2.38	2.93	1.94	2.76	1.62	2.66	2.17
.25	.44	.62	.37	.48	.41	.54	.36	.47	.31	.87	.63
.50	.41	.67	.27	.53	.49	.45	.44	1.00	.81	1.03	1.04
1.61	1.38	1.31	1.10	.97	1.14	1.42	1.74	1.78	1.53	2.72	2.62
.40	.51	.24	.57	.13	.24	.53	.44	1.24	1.02	1.08	.93
.06	.07	.08	.06	.07	.04	.03	.02	.08	.08	.01	.06
1.23	1.05	1.00	.77	.92	.77	.40	.34	.99	.83	1.15	.99
.88	.82	.80	.57	.73	.77	.77	.96	.93	.78	.40	.43
3.24	2.38	3.51	2.56	1.42	1.06	1.67	1.41	3.77	2.98	1.28	1.02
.40	.68	.37	.50	.25	.31	.44	.47	.71	.66	.83	.73
7.81	5.79	7.20	.89	6.94	4.00	7.66	6.51	5.39	5.87	9.35	8.06
7.12	4.99	6.71	5.35	6.24	3.21	5.37	4.79	3.66	4.04	5.72	4.92
.55	.60	.40	.45	.54	.61	.11	.18	.20	.21	.74	.80
.12	.17	.....	.....	.....	.....	.....	.....	.62	.80	.....	.....
.02	.03	.09	.09	.02	.02	.13	.03	.05	.04	.03	.03
.....	.....	.....	.....	.14	.16	2.05	1.51	.86	.78	2.86	2.31
2.93	2.25	2.14	2.08	3.34	3.02	3.02	2.40	1.09	1.70	.64	.27
2.41	1.51	1.75	1.58	2.47	2.26	2.14	1.66	.75	1.38	.46	.12
.52	.74	.39	.50	.87	.76	.88	.74	.34	.32	.18	.15
.98	1.10	1.05	1.10	.86	1.04	.55	.50	1.10	.88	1.37	.93
.18	.18	.18	.16	.13	.19	.10	.09	.13	.12	.13	.10
.20	.25	.28	.29	.11	.15	.20	.15	.24	.24	.61	.25
.60	.67	.59	.65	.62	.70	.25	.26	.73	.52	.63	.58
2.82	2.54	2.15	2.14	2.76	2.48	1.81	1.45	4.37	2.20	2.43	1.69
2.17	2.11	1.59	1.78	1.98	1.72	1.12	1.16	3.81	1.96	1.61	.86
.65	.43	.56	.36	.78	.76	.69	.29	.56	.24	.82	.83
.33	.35	.40	.43	.25	.28	.18	.20	.30	.30	.34	.39
.16	.18	.13	.15	.07	.09	.06	.07	.14	.15	.09	.11
.10	.10	.14	.14	.13	.13	.05	.06	.05	.05	.14	.14
.07	.07	.13	.14	.05	.06	.07	.07	.11	.10	.11	.14
15.21	13.79	16.73	15.55	10.08	10.64	16.92	15.91	14.08	13.43	19.41	18.76
1.32	1.27	2.64	2.53	1.64	1.90	2.79	2.70	1.96	1.67	5.23	5.02
1.31	1.26	1.15	1.52	.98	.97	2.02	1.88	1.60	1.54	2.56	2.54
2.75	2.59	2.50	2.33	2.29	2.59	2.71	2.95	2.28	2.31	3.71	3.85
2.04	1.41	1.96	1.90	1.06	.85	1.90	1.78	1.07	.96	1.16	1.15
.85	.97	.82	.79	.52	.56	1.97	1.80	.63	.61	1.05	.95
.....	.....	.....	.....	.35	.41	.....	.....	.....	.....	.....	.....
6.83	6.29	7.66	6.48	3.24	3.33	5.53	4.80	6.54	6.31	5.62	5.22
.11	.....	.....	.....	.....	.03	.....	.....	.....	.03	.08	.03

TABLE

Comparative Statement of Average Maintenance Cost per Capital

	Brockville.		Hamilton.		Kingston.	
	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
Days' residence of patients	284,371	277,297	465,283	468,437	208,321	206,429
Average number of patients	779.09	757.64	1,274.74	1,279.88	570.74	564.01
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
ALLOWANCES	**5.70**	**4.69**	**4.21**	**2.93**	**5.79**	**5.55**
Employees' Meals	5.39	4.32	3.89	2.65	5.60	4.97
" Uniforms	.16	.22	.27	.22	.18	.31
" Other Allowances	.15	.15	.05	.06	.01	.27
FARM AND GARDEN	**7.13**	**6.92**	**5.73**	**4.79**	**4.81**	**4.82**
Feed and Fodder	3.60	3.58	3.19	2.60	2.67	3.09
Miscellaneous Farm Expenses	1.00	1.12	.63	.59	.49	.47
Seeds, etc	.40	.24	.41	.33	.28	.25
Salaries	2.13	1.98	1.50	1.27	1.37	1.01
CONTINGENCIES	**.65**	**.78**	**.82**	**.65**	**.76**	**.92**
Amusements, Religion, Education	.17	.21	.08	.04	.11	.18
Elopers, Cost of Recovery	.02	.02	.01	.01	.02	.04
Freight, Duties, etc	.13	.08	.11	.08	.15	.11
Ice	.04	.08	.18	.14	.01	.....
Incidental Expenses	.26	.30	.39	.33	.45	.49
Officers' Travelling Expenses	.03	.09	.05	.05	.02	.10
Per Capita cost per day, less Salaries	38.74	32.57	34.46	29.03	42.00	35.89
" " " " " of Salaries	25.52	22.99	18.15	16.24	26.59	25.51
Total gross per Capita cost per day	64.26	55.56	52.61	45.27	68.59	61.40
Less total recovery per Capita per day	**16.66**	**15.87**	**18.10**	**15.39**	**15.36**	**14.97**
Net per Capita burden payable by Province	47.60	39.69	34.51	29.88	53.23	46.43

N.B.—The accompanying is a Comparative Statement of the cost of maintenance per patient per day for the twelve months ending 31st October, 1917, in the nine Hospitals for the Insane, as compared with the twelve months ending 31st October, 1916, based on actual consumption and calculated to two places of decimals of a cent. The figures in black-faced type represent totals.

Under the headings "Provisions" and "Clothing" is shown the actual consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included under the heading "Allowances."

Where no charge is shown for light or water, these are included in the cost of coal.

No. 14—*Concluded.*

per Day for the Twelve Months ending 31st October, 1917.—*Concluded.*

London.		Mimico.		Orillia.		Penetang.		Toronto.		Woodstock.	
This Year	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.	This Year.	Last Year.
425,667	416,844	237,583	238,598	343,158	300,303	133,417	133,113	360,249	368,109	76,411	75,726
1,116.21	1,138.92	650.91	651.91	940.16	820.50	365.39	363.70	986.99	1,005.76	209.35	206.90
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
4.55	**4.10**	**4.84**	**4.34**	**3.39**	**3.26**	**4.75**	**4.03**	**4.31**	**3.72**	**6.97**	**5.87**
4.25	3.80	4.40	3.92	3.25	3.08	4.41	3.76	4.03	3.35	6.46	5.31
.27	.27	.28	.28	.11	.16	.20	.11	.26	.32	.18	.24
.03	.03	.16	.14	.03	.02	.14	.16	.02	.05	.33	.32
5.84	**5.01**	**5.27**	**4.90**	**3.15**	**2.97**	**7.00**	**6.01**	**.84**	**.70**	**15.07**	**15.88**
3.22	2.51	2.28	2.02	1.66	1.47	4.07	3.04	.13	.18	8.17	7.24
.58	.61	.72	.96	.42	.91	.45	.40	.11	.08	1.30	3.68
.45	.48	.35	.35	.17	.16	.13	.34	.01	.03	.74	.80
1.59	1.41	1.92	1.57	.90	.43	2.35	2.23	.59	.41	4.86	4.16
.35	**.50**	**.49**	**.51**	**.32**	**.35**	**.52**	**.38**	**.75**	**.77**	**.25**	**.33**
.09	.09	.11	.10	.07	.07	.04	.01	.07	.05	.05	.03
.01	.02	.01	.....	.....	.....	.....	.....	.01	.....	.....	.....
.04	.04	.04	.04	.12	.10	.15	.09	.17	.09	.07	.06
.....	.....	.13	.14	.....	.....	.....	.....	.31	.27	.....	.....
.19	.34	.20	.23	.11	.16	.31	.26	.16	.28	.10	.23
.02	.01	.....	.....	.02	.02	.02	.02	.03	.08	.03	.01
35.04	29.86	32.88	27.91	29.09	25.17	30.69	26.46	31.58	26.76	41.49	38.48
21.35	19.30	23.49	21.46	14.37	14.33	24.02	22.17	18.98	17.56	31.24	28.79
56.39	49.16	56.37	49.37	43.46	39.50	54.71	48.63	50.56	44.32	72.73	67.27
18.06	**15.00**	**18.39**	**14.87**	**7.10**	**7.82**	**9.01**	**6.98**	**14.83**	**14.25**	**38.02**	**34.97**
38.33	34.16	37.98	34.50	36.36	31.68	45.70	41.65	35.73	30.07	34.71	32.30

TABLE

Comparisons, Appropriation, Expenditure, Consumption, Population

—		Brockville.	Hamilton.	Kingston.
Days' residence of patients,		284,371	465,283	208,321
Average number of patients		779.09	1,274.74	570.74
Medicines	Appropriation	$1,800 00	$1,800 00	$1,800 00
	Expenditure	1,350 46	1,446 34	1,143 88
	Consumption	1,350 46	1,504 02	1,149 85
Provisions	Appropriation	51,000 00	97,000 00	43,000 00
	Expenditure	50,849 61	96,383 79	40,546 98
	Consumption	44,045 20	85,962 12	36,086 41
Fuel, Light and Water	Appropriation	36,000 00	40,000 00	35,000 00
	Expenditure	32,676 02	36,708 89	34,520 95
	Consumption	29,017 23	27,984 69	23,296 97
Clothing, etc	Appropriation	8,500 00	17,500 00	7,500 00
	Expenditure	8,465 02	15,028 66	7,090 08
	Consumption	9,695 95	8,740 31	7,145 17
Laundry, etc	Appropriation	3,000 00	3,500 00	3,000 00
	Expenditure	2,865 77	2,730 65	1,733 70
	Consumption	2,812 35	2,779 66	1,814 75
General Repairs, etc	Appropriation	7,000 00	13,000 00	8,500 00
	Expenditure	6,708 83	10,984 96	8,077 56
	Consumption	5,835 91	8,422 30	8,498 40
Office	Appropriation	1,500 00	1,800 00	1,500 00
	Expenditure	1,351 44	1,509 00	747 62
	Consumption	1,352 04	1,483 94	765 79
Salaries	Appropriation	65,862 00	81,020 00	58,350 00
	Expenditure	56,362 07	64,877 69	43,337 38
	Consumption	66,518 09	77,470 61	52,546 52
Farm, etc	Appropriation	10,000 00	15,500 00	7,000 00
	Expenditure	9,842 92	14,370 68	6,682 92
	Consumption	20,278 98	26,647 36	10,034 38
Contingencies	Appropriation	2,600 00	3,850 00	2,550 00
	Expenditure	1,758 91	3,299 23	1,615 44
	Consumption	1,853 27	3,793 98	1,597 96
Total Maintenance	Appropriation	187,262 00	274,970 00	168,200 00
	Expenditure	172,231 05	247,339 89	145,496 51
	Consumption	182,759 48	244,788 99	142,936 20
Capital Accounts	Appropriation	36,100 00	26,300 00	18,900 00
	Expenditure	25,552 26	20,646 36	7,203 65
Grand Totals	Appropriation	223,362 00	301,270 00	187,100 00
	Expenditure	197,783 31	267,986 25	152,700 16
REVENUE COLLECTIONS.				
From paying patients this year to date		28,172 40	52,343 49	22,224 25
" " last "		26,672 62	51,041 71	21,972 08
Patients Revenue per capita this year	cents	9.91	11.25	10.67
" " " last "	cents	9.62	10.89	10.64
From Farm and Misc. Sales this year		$6,035 34	15,721 81	1,622 67
" " last "		3,274 51	2,710 37	870 87
Farm and Misc. Revenue per capita this year	cents	2.12	3.37	.78
" " " last "	cents	1.18	.58	.42
Total Revenue this year		$34,207 74	68,065 30	23,846 92
" last "		29,947 13	53,752 08	22,842 95
Total Revenue per capita per day this year	cents	12.03	14.62	11.45
" " " last "	cents	10.80	11.47	11.06
Farm Production Consumption this year	cents	4.63	3.48	3.91
" " last "	cents	5.07	3.92	3.91
Total Recovery per capita this year	cents	16.66	18.10	15.36
" " last "	cents	15.87	15.39	14.97

No. 15.

and Revenue for the Twelve Months ending 31st October, 1917.

London.	Mimico.	Orillia.	Penetang.	Toronto.	Woodstock.
425,667	237,583	343,158	133,417	360,249	76,411
1,166.21	650.91	940.16	365.39	986.99	209.35
$1,800 00	$1,500 00	$2,100 00	$750 00	$1,800 00	$900 00
894 51	1,285 18	1,880 64	209 39	1,332 22	665 47
894 51	1,285 18	1,880 64	209 92	1,332 22	665 47
78,000 00	41,000 00	59,000 00	19,000 00	87,000 00	15,000 00
75,613 03	40,428 67	50,523 40	18,990 12	82,889 11	14,991 58
65,342 24	36,970 84	40,567 30	16,205 76	64,696 51	12,250 50
58,000 00	28,000 00	43,000 00	26,600 00	27,500 00	8,500 00
38,504 44	18,499 63	42,877 48	22,425 33	21,895 53	7,976 97
33,264 06	17,099 65	23,801 24	10,224 07	19,417 16	7,145 34
14,250 00	7,500 00	14,000 00	5,300 00	10,000 00	2,000 00
13,849 78	6,740 43	13,949 11	4,822 87	9,847 06	572 34
12,485 97	5,085 73	11,450 45	4,023 75	3,941 87	487 49
4,500 00	3,000 00	3,500 00	1,500 00	4,500 00	1,500 00
4,117 30	2,557 15	2,884 01	967 51	4,482 75	1,129 22
4,165 09	2,477 42	2,959 27	728 19	3,970 52	1,051 09
14,500 00	7,000 00	9,000 00	3,000 00	10,500 00	2,200 00
12,650 99	5,592 06	8,997 54	2,900 26	10,352 09	1,943 32
12,004 87	5,111 79	9,495 08	2,418 12	15,739 24	1,854 24
1,500 00	1,200 00	1,200 00	600 00	1,500 00	500 00
1,471 38	943 16	894 29	249 96	1,071 10	422 63
1,414 55	948 52	846 71	249 96	1,083 60	259 74
79,860 00	54,165 00	52,542 00	30,618 00	67,222 00	21,566 00
71,521 73	44,329 75	37,694 73	25,716 36	52,853 46	18,545 89
84,099 72	51,253 86	46,237 34	28,922 93	66,255 03	20,154 39
15,000 00	5,000 00	6,800 00	6,300 00	3,700 00	4,500 00
14,704 61	4,566 53	6,393 59	5,904 39	1,119 01	4,494 46
24,859 08	12,533 27	10,801 83	9,325 56	3,042 61	11,514 60
2,500 00	2,200 00	1,900 00	1,150 00	3,500 00	1,000 00
1,495 66	1,185 49	1,249 21	726 51	2,686 47	239 92
1,504 97	1,166 14	1,116 99	687 80	2,686 47	192 02
269,910 00	150,565 00	193,042 00	94,818 00	217,222 00	57,666 00
234,823 43	126,128 05	167,344 00	82,912 70	188,528 80	50,981 80
240,035 06	133,932 40	149,156 85	72,996 06	182,165 23	55,574 88
34,000 00	26,300 00	54,300 00	11,900 00	143,800 00	9,000 00
24,201 69	20,646 36	15,991 08	7,630 65	135,296 68	2,438 03
303,910 00	176,865 00	247,342 00	106,718 00	361,022 00	66,666 00
259,025 12	146,774 41	183,335 08	90,543 35	323,825 48	53,419 83
52,353 30	26,512 70	14,487 59	2,908 29	52,046 03	17,872 88
43,635 45	24,371 65	10,405 99	2,157 17	51,553 29	14,041 52
12.30	11.16	4.22	2.18	14.45	23.39
10.47	10.21	3.47	1.62	14.00	18.53
8,946 73	3,216 52	2,417 21	2,553 40	902 41	4,243 55
4,653 06	1,298 57	4,717 47	1,972 22	622 26	3,509 85
2.10	1.35	.70	1.91	.25	5.55
1.12	.54	1.57	1.48	.17	4.63
61,300 03	29,729 22	16,904 80	5,461 69	52,948 44	22,116 43
48,288 51	25,670 22	15,123 46	4,129 39	52,175 55	17,551 37
14.40	12.51	4.92	4.09	14.70	28.94
11.59	10.75	5.04	3.10	14.17	23.16
3.66	5.88	2.18	4.92	.13	9.08
3.41	4.12	2.78	3.88	.08	11.81
18.06	18.39	7.10	9.01	14.83	38.02
15.00	14.87	7.82	6.98	14.25	34.97

Main Building, Orillia.

General View of Main Building and Grounds Overlooking Lake, Orillia.

Farm, Orillia Hospital.

Industrial Class, Orillia Hospital.

May-Day, Orillia Hospital.

Bird's-eye View of Buildings and Grounds, Woodstock.

Cottages, Woodstock.

The Pond, Woodstock.

APPENDIX

TO FIFTIETH ANNUAL REPORT UPON THE HOSPITALS FOR THE INSANE, CONTAINING THE ANNUAL REPORTS OF THE MEDICAL SUPERINTENDENTS OF THE HOSPITAL FOR IDIOTS, ORILLIA, AND THE HOSPITAL FOR EPILEPTICS, WOODSTOCK.

HOSPITAL FOR THE FEEBLE-MINDED, ORILLIA.

W. W. Dunlop, Esq.,

Inspector, Parliament Buildings, Toronto Ont.

Sir,—I have the honour to present the annual report of the Hospital for Feeble-minded for the year ended October 31st, 1917. The movement of population during the twelve months has been more pronounced than usual. The ordinary admissions of feeble-minded number 81. In addition we were required to accommodate 150 female patients transferred from Whitby Hospital for the Insane. This transfer was made necessary by the demand for accommodation for wounded and invalided soldiers.

The Whitby Institution was given over to the Military Hospitals Commission and one of our new cottages was the most readily available building to accommodate the patients from that place. This very necessary and worthy change in the plans of the Department has left us practically unimproved as far as accommodation for the female feeble-minded is concerned. The Whitby transfer was effected on February 9th and it is gratifying to be able to report that this rather extensive addition to our household has been made quite comfortable and happy.

The new North Cottage for boys was opened on October 22nd, 1917. It is capable of accommodating 150 patients. We have transferred from the other buildings the out-workers and the boys employed in the inside industries. Through this increase in accommodation we have been enabled to take in many of the most pressing cases throughout the Province. In the re-classification of our male population, which the use of this building permits, we have in mind the ultimate reservation of our main building for training school purposes exclusively. This will mean a capacity for at least 300 boys and girls of school age and of an improvable character with the necessary adult patient help to keep the household department in smooth running order. In the cottages, four in number, will be housed the custodial cases and the adult workers.

With this Hospital, as well as with every other industry and institution, the labour problem has been growing increasingly serious. Since the outbreak of war we have refused to take into the service unmarried men physically fit and of military age. We have no accommodation for married couples and no houses for employees except for the heads of three or four departments. This means that a position at this Institution for a married man who has to maintain a home in town, is of doubtful value. We, therefore, have been compelled to accept the service of boys under military age and old men who have no one depending upon them. At no period in the past year have we had a full staff and at times we have had to get along with two-thirds of the regular number. Considering the situation we have reason to be grateful for the service rendered and the general character of the work of the Institution.

During the past year satisfactory progress has been made in carrying through the extensive building programme which was inaugurated four years ago. The completion of the new North Cottage and the erection of a laundry building in the centre of the court were the chief features. The laundry building is modern in design, has an attractive exterior and is fireproof throughout. The kitchen

block to be partly reconstructed and partly new, is all that remains to complete the scheme and make our Institution one of the largest and most modern on this continent.

The internal direction of the Institution has gone on satisfactorily. Only those families who have had to deal with the feeble-minded child can appreciate the self-sacrifice and devotion, on the part of the officers, nurses, and attendants essential to the proper conduct of this Hospital. Each young patient who comes to us is a new problem. The defective children are as diverse in temperament, character and disposition as normal children. Each may have some peculiar trait or characteristic. Most of them are strangers to order and discipline and have had developed in them a self-willed waywardness that is not readily reduced to ordered obedience. And yet, it is probably true that in the routine of this place ten of our children do not cause as much trouble and worry as one feeble-minded child in the home. The reason for this is not far to seek. There is something like mob psychology in it. The child in the home is the individual. He does largely what he pleases. The child in the Institution must move with the other children through a great many exercises of the day and only at the specified recreation periods may he follow his own impulses.

Remarkable examples of the influences of training have been revealed in some of the year's admissions. We have space for only two: (1) One child who screamed almost continuously through the night and slept only intermittently through the day was for a long time a source of much discomfort to the nurses and the other children in the division. Gradually the effect of the kindly direction of a nurse, the more constant and regular exercise through the day and the regular hours for rising and retiring began to tell, and now this patient gives as little trouble as any child in the Hospital. (2) Only a few months ago a case came to us that had baffled all efforts of management at home. The only way the mother could at all control the child was to have him tied constantly with a rope and when she moved to another apartment she took the child with her. At night he was put in a sleeping bag and the bed securely guarded. When he came to us the rope was discarded and the sleeping bag was never required. The child has developed obedience and order, will run messages and stand at salute when a visitor enters the ward.

The industries still constitute the most important feature of the work of this Hospital. The schools—kindergarten and primary—and calisthenic and musical exercises and the military drill are all valuable and—apart from the benefit to each pupil—make for the greater pleasure and happiness of the entire population. But industrial training and the industries must ever be the foundation of the moral and mental betterment of these children. The most unpromising cases, resentful, rebellious, quarrelsome, have, by the kind but firmly enforced discipline and the uplifting influences of healthful industry, been brought into the circle of happiness and contentment. The following figures will afford an idea of the nature of the employment of our patients:

Males: General outside work, 35; stable, etc., 10; gardener, 10; tailor, 7; mason, 7; laundry, 7; baker, 6; kitchen, 6; painter, 4; shoemaker, 2; dining-rooms, 12; store, 2; boiler house, 10; halls, 8; wards, 90; general, 12; carpenter, 4.

Females: Laundry, 24; vegetable cellar, 12; sewing-room, 16; milkers, 12; dining-rooms, 25; officers' quarters, 7; wards, 116.

Recently we were asked for a report on a group of girls who had come to us from one of the branches of the Children's Aid Society. The history and

environment of most of these cases before their admission had been bad. Some of them were absolutely unmanageable. We were enabled to report that all of these patients are doing well, engaged in useful and improving work. One only had earned a reprimand during the past year and that was for a not very serious offence. One or two quotations from the history notes of these children and the last report from their supervisor might be fairly taken as the experience of the whole group. A and B are two sisters. A was described in the history form at the time of admission as "stubborn, secretive, unmanageable, immoral and a trouble maker." The last report in reference to this girl says: "She has become, with occasional relapses, a very useful worker in the laundry where she exercises considerable care in her work." B was described in the history form as "dirty and simple." Her school report runs: "She is now learning to read and does many useful things in simple handicraft with promise of considerable further improvement."

An interesting observation in connection with our admissions for the year is the relative number of cases in which it has not been possible to establish any hereditary mental defect. It may be that in some instances where the history is negative it would be possible to discover some members of a previous generation showing nervous or mental disability, but the fact remains that these defective children frequently come to us from homes where the environment is reported good and where the family is average or above the average of good citizenship.

Of the 81 admissions there were 7 in which no history could be ascertained. Of the remaining 74 we were able to find, in 42 instances, one or more relatives in some way mentally affected, while in 32 our inquiry resulted in a definitely negative history. One fact that may be worthy of note here is that the history forms on file reveal a very small percentage of cases whose defectiveness is traceable to consanguinity. Of the 81 admissions in 1917, there was only one instance of intermarrying revealed. The questions arising out of heredity have not been finally answered and it is unwise to jump at conclusions. There are here many interesting problems for research and minute analysis which time and effort may help us to understand.

At the close of the year 1917 our records showed that 2,800 patients had been received and treated at this hospital since its opening. This figure represents a generous measure of humanitarian effort on the part of the Government of Ontario towards the most helpless class in the community. All the more worthy seems the record in presence of the fact that ours is the only Province in the Dominion that has made any organized movement for the care and training of the feeble-minded. Before the year now entered upon has reached its close we shall have a population of about eleven hundred at this hospital. Those who would create the impression that nothing has been done or is being done by the Province of Ontario for mental defectives must deliberately close their eyes to the generous appropriations of the Government and the devoted services of good men and women during the past forty years. Comparisons of the work of this hospital with that of institutions in the United States that leaves out of consideration the per capita expenditure are hardly fair. A great showing can be made especially in those features that make for show if the financial resources of an institution are unlimited. I have before me, as I write, reports from some sister institutions. One which has attained an enviable reputation as a training school has a population of about four hundred and seventy-five and the cost of maintenance for the year under review, in cash and farm returns, was slightly over $203,000, or

a per capita cost per day of $1.15. Last year our average daily population was 940 and the gross per capita cost per day was forty-three and a half cents. Take the item of salaries alone: The institution with 475 children paid out in salaries over $59,000. Our total payroll with 940 patients was $34,310. These figures suggest that the just appraisal of the work of any institution must have regard to the equipment and resources at its disposal.

Within the scope of its resources what are the objects which this Hospital labours to attain? There come to us all grades of defectives, from the idiot to the moron. The policy of the institution towards these unfortunates and the object of the labours of its staff may be expressed in a few words: (1) Make them comfortable; (2) make them happy; (3) make them useful. All can be made comfortable; nearly all can be made happy; a great many can be made useful.

Some changes have taken place in the personnel of the staff since the last report. Dr. H. G. Smith, physician, Miss E. M. Corley, matron, and Miss Weber, stenographer, have resigned. We have had a temporary supply at times for the work of physician. Miss M. Tisdall has been appointed to the position of stenographer and the matron's place is still vacant.

I have the honour to be, Sir,

Your obedient servant,

J. P. Downey,

Superintendent.

TABLE No. 1—ORILLIA.

Showing movements of patients in the Hospital for the official year ending Oct. 31st, 1917.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	550	550	1,100			
In residence Oct. 31st, 1916	.....	.....	.....	432	396	828
Admitted during year 1917 by transfer from Whitby	.....	150	150			
By Warrant	3	2	5			
By Medical Certificate	44	32	76	47	184	231
Total number under treatment during year	.....	.....	.....	479	580	1,059
Discharges during year:						
As recovered	.....	.....	.....			
As improved	7	3	10			
As unimproved	.....	2	2			
As not insane	.....	.....	.....			
Total number discharged during year	9	3	12			
Died	24	25	49			
Deported	.....	1	1			
Eloped	1	.....	1			
Transferred	2	2	4	36	31	67
Remaining in Hospital Oct. 31st, 1917	.....	.....	.....	443	549	992
Total number admitted since opening of Hospital	.....	.....	.....	1,425	1,375	2,800
Total number discharged since opening of Hospital	147	97	244			
Total number died since opening of Hospital	773	698	1,471			
Total number deported since opening of Hospital	2	1	3			
Total number eloped since opening of Hospital	12	.....	12			
Total number transferred since opening of Hospital	48	30	78	982	826	1,808
Total remaining in Hospital Oct. 31st, 1917	.....	.....	.....	443	549	992
Daily average population	432	507	939			
Collective days' stay of all patients in residence during year	157,863	185,398	343,261			
Number of applications on fyle	.....	.....	565			

TABLE No. 2.—ORILLIA.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

	Admissions of year.			In residence.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	47	120	167	441	486	927	1,412	1,298	2,710
Married	.....	52	52	2	51	53	11	64	75
Widowed	.....	12	12	.....	12	12	.....	13	13
Divorced	.....	.....	.....	.....	.....	.....	.....	.....	.....
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....	.....	2	2
Total	47	184	231	443	549	992	1,425	1,375	2,800
RELIGION.									
Baptists	2	7	9	19	21	40	61	48	109
Congregationalists	.....	.....	.....	1	1	2	4	3	7
Episcopalians	16	51	67	83	117	200	265	290	555
Methodists	5	50	55	87	134	221	347	355	702
Presbyterians	8	29	37	89	101	190	255	255	510
Roman Catholics	9	32	41	83	78	161	265	204	469
Other Denominations	4	1	5	35	47	82	93	83	176
Unascertained	3	14	17	46	50	96	135	137	272
Total	47	184	231	443	549	992	1,425	1,375	2,800

TABLE No. 3—ORILLIA.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	47	184	231	1,425	1,375	2,800
Total born in Canada	36	136	172	1,171	1,125	2,296
Armenia						
Assyria						
Austria				4	1	5
Australia						
Belgium						
Bulgaria						
Central America						
China						
Denmark						
England	8	23	31	85	92	177
France		1	1	3	2	5
Finland						
Galicia						
Germany		2	2	12	9	21
Greece						
Holland						
Hungary						
Ireland		9	9	50	52	102
Italy						
Japan						
Newfoundland		1	1		1	1
Other British Possessions				3	2	5
Norway						
Roumania						
Russia				3	5	8
Scotland		6	6	33	31	64
South America						
Spain						
Sweden				3	2	5
Turkey						
United States	3	6	9	23	21	44
West Indies						
Unascertained				35	32	67
Totals	47	184	231	1,425	1,375	2,800

TABLE No. 4—ORILLIA.

Showing the Occupation of those admitted during the year and since the opening of Hospital.

Occupation.	Admitted this Year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	.....	1	1	.....	1	1
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	.....	.....	.....	3	.....	3
Agricultural and Pastoral:— Farmers, Gardeners, Stock Men, etc.	.....	.....	.....	6	.....	6
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	.....	.....	.....	2	.....	2
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	.....	17	17	.....	17	17
Domestic Service: Waiters, Cooks, Servants, etc.	.....	35	35	.....	54	54
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	.....	61	61	1	62	63
Miners, Marine Engineers, Railway Employees, Seamen, etc.	.....	.....	.....	1	.....	1
Laborers	.....	.....	.....	22	.....	22
No Occupation	47	70	117	1,390	1,241	2,631
Unascertained	.....	.....	.....	.....	.....	.....
Totals	47	184	231	1,425	1,375	2,800

TABLE No. 5.—ORILLIA.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant cases. Admitted during year.			Warrant cases. Admitted since opening.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	1	1	2	15	16	31	....	....	....	2	2	4	3	5	8
Brant	1	1	2	24	17	41	....	....	....	1	....	1	9	2	11
Bruce	1	1	2	36	32	68	....	....	....	5	4	9	8	6	14
Carleton	3	2	5	52	42	94	....	....	....	6	5	11	17	21	38
Dufferin	....	....	....	6	11	17	....	....	....	.....	2	2	1	2	3
Dundas	....	1	1	12	6	18	....	....	....	3	1	4	2	4	6
Durham	....	6	6	17	26	43	....	....	....	.....	.....	.....	5	7	12
Elgin	2	3	5	12	21	33	....	....	....	.....	4	4	4	6	10
Essex	3	....	3	33	23	56	....	....	....	2	3	5	6	8	14
Frontenac	....	6	6	50	45	95	....	....	....	16	13	29	12	12	24
Glengarry	....	....	....	12	5	17	....	....	....	4	....	4	4	1	5
Grenville	....	....	....	14	11	25	....	....	....	.....	1	1	1	2	3
Grey	....	6	6	56	43	99	....	....	....	13	5	18	12	12	24
Haldimand	1	....	1	21	8	29	....	....	....	4	....	4	2	1	3
Halton	1	1	2	15	12	27	....	....	....	1	2	3	3	4	7
Hastings	1	4	5	33	37	70	....	....	....	7	5	12	16	11	27
Huron	....	1	1	36	27	63	....	....	....	6	3	9	6	3	9
Kent	....	1	1	27	29	56	....	....	....	2	3	5	9	6	15
Lambton	1	1	2	31	23	54	....	....	....	4	4	8	10	8	18
Lanark	....	1	1	10	8	18	....	....	....	4	1	5	2	3	5
Leeds	....	....	....	17	14	31	....	....	....	6	3	9	4	4	8
Lennox and Addington	....	1	1	19	21	40	....	....	....	2	7	9	6	7	13
Lincoln	1	2	3	11	13	24	....	....	....	2	2	4	5	6	11
Middlesex	....	4	4	65	37	102	....	....	....	6	1	7	23	11	34
Muskoka District	....	2	2	19	22	41	....	....	....	2	1	3	6	8	14
Nipissing District	2	4	6	13	15	28	....	....	....	4	....	4	10	10	20
Norfolk	....	....	....	11	15	26	....	....	....	5	5	10	1	5	6
Northumberland	....	9	9	15	28	43	....	....	....	5	3	8	6	12	18
Ontario	....	6	6	43	36	79	....	....	....	6	1	7	9	15	24
Oxford	....	....	....	32	31	63	....	....	....	7	1	8	10	9	19
Parry Sound Dist.	1	3	4	5	5	10	....	1	1	1	1	2	4	8	12
Peel	....	3	3	11	26	37	....	....	....	3	3	6	3	13	16
Perth	....	2	2	19	26	45	....	....	....	7	2	9	2	10	12
Peterborough	2	6	8	22	30	52	1	....	1	7	5	12	9	12	21
Prescott	....	....	....	12	4	16	....	....	....	7	2	9	9	1	10
Prince Edward	....	2	2	8	14	22	....	....	....	.....	.....	.....	4	3	7
Rainy River District	2	....	2	2	1	3	1	....	1	1	....	1	2	1	3
Renfrew	....	2	2	20	26	46	....	....	....	1	5	6	8	12	20
Russell	....	....	....	4	7	11	....	....	....	.....	.....	.....	...	6	6
Simcoe	4	5	9	95	86	181	....	....	....	15	7	22	24	33	57
Stormont	....	....	....	13	7	20	....	....	....	11	....	11	2	2	4
Thunder Bay Dist.	2	1	3	3	1	4	1	....	1	1	....	1	2	1	3
Victoria	....	5	5	22	21	43	....	....	....	5	1	6	2	10	12
Waterloo	....	....	....	25	25	50	....	....	....	2	....	2	7	8	15
Welland	....	1	1	9	11	20	....	....	....	.....	1	1	3	3	6
Wellington	1	2	3	28	25	53	....	....	....	2	2	4	4	11	15
Wentworth	1	14	15	66	76	142	....	....	....	3	8	11	21	42	63
York	16	67	83	287	286	573	....	....	....	33	14	47	124	153	277
Unascertained	....	5	5	16	19	35	....	....	....	2	2	4	...	5	5
Temiskaming	....	1	1	1	1	2	....	1	1	1	1	2	1	1	2
Haliburton	....	1	1	.....	4	4	....	....	....	.....	1	1	...	3	3
Totals	47	184	231	1,425	1,375	2,800	3	2	5	227	137	364	443	549	992

TABLE No. 6.—ORILLIA

Showing hereditary tendency to Insanity in patients admitted during the year and since the opening of the Hospital.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	5	16	21
Maternal Branch	8	12	20
Paternal and Maternal Branches	4	5	9
Collateral Branches	6	28	34
No Hereditary Tendency	19	75	94
Unascertained	5	48	53
Totals	47	184	231

TABLE No. 7—ORILLIA.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Discharge	8	7	15
Discharged, Recovered	.....	.....	.....
" Improved	3	1	4
" Unimproved	.....	.....	.....
Died	.....	.....	.....
Returned to Hospital	4	4	8
Absent on Probation on October 31st, 1917	1	2	3
	8	7	15

TABLE No. 8—ORILLIA

Showing the causes of death of patients who died during the year and since the opening of the hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid-Fever		1	1	17	17	34
Influenza				2	7	9
Cerebro-spinal Meningitis				3	10	13
Diphtheria				2	2	4
Erysipelas				3	2	5
Septicaemia		2	2	6	7	13
Dysentery	1	3	4	14	18	32
Syphilis				3		3
Tuberculosis	9	5	14	186	176	362
Other Infections				8	9	17
Constitutional Diseases:—						
Rheumatism				1		1
Arthritis Deformans				1		1
Diabetes Mellitus				2		2
Diseases of the Digestive System:—						
Mouth, salivary glands						
Pharynx						
Tonsils					1	1
Œsophagus				1	2	3
Diseases of the Intestines:—						
Diseases of the Liver				9	5	14
" " Pancreas				2	1	3
" " Peritoneum				33	22	55
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx				3	2	5
" " Bronchi				12	8	20
" " Lungs		1	1	52	63	115
" " Pleura	1		1	9	2	11
Diseases of the Circulatory System:—						
Diseases of the Pericardium				2	1	3
" " Heart	3	3	6	62	56	118
Arterio-sclerosis	1		1	2	2	4
Aneurism						
Diseases of the Blood and Ductless Glands:—						
Anæmia				8	9	17
Pernicious Anæmia				4	7	11
Leukæmia					2	2
Exophthalmic Goitre						
Diseases of the Genito-Urinary System		1	1	17	7	24
Totals—*Carried Forward*	15	16	31	464	438	902

TABLE No. 8—ORILLIA—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	15	16	31	464	438	902
Diseases of the Nervous System :—						
Diseases of the Nerves.....	.....	.....	.....	10	6	16
" " Spinal Cord.....	.....	.....	.....	3	6	9
" " Meninges.....	.....	.....	.....	2	9	11
Organic Diseases of the Brain. (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage, and other gross lesions).....	.....	2	2	14	18	32
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria).....	.....	.....	.....	1	3	4
Epilepsy.....	8	4	12	113	94	207
Mental Diseases :—						
Exhaustion of Acute Mental Disease.	.....	.....	.....	.....	1	1
" " Chronic " "	.....	1	1	1	1	2
General Paresis.....	.....	.....	.....	53	37	90
Intoxications:—						
Alcoholism	.....	.....	.....	.....	.....	.....
Morphinism.....	.....	.....	.....	.....	.....	.....
Metallic Poisoning.....	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	1	1
Debility of Old Age.....	1	1	2	91	66	157
Accident.....	.....	.....	.....	5	4	9
Suicide	.....	.....	.....	.....	.....	.....
Surgical Diseases	.....	1	1	15	10	25
Gynæcological Diseases.....	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer.....	.....	.....	.....	2	3	5
Totals	24	25	49	774	697	1,471

TABLE No. 9—ORILLIA.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male	Female	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	....	....	....	....	....	....	....	....
(b) Infection Delirium	....	....	....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	....	....	....	....	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	....	....	....	....	....	....	....	....	....
(b) Acute Confusional Psychoses	....	....	....	....	....	....	....	....	....
(c) Neurasthenia	....	....	....	....	....	....	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	....	....	....	....	....	....	....	....	....
(b) Chronic "	....	....	....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	....	....	....	....	....	....	....	....	....
(b) Delirium Tremens	....	....	....	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	....	....	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	....	....	....	....	....	....	....
(f) " Paranoia	....	....	....	....	....	....	....	....	....
(g) " Paresis	....	....	....	....	....	....	....	....	....
(h) Morphinism	....	....	....	....	....	....	....	....	....
(i) Cocainism	....	....	....	....	....	....	....	....	....
Thyroigenous Psychoses:									
(a) Mixœdematous Psychoses	....	....	....	....	....	....	....	....	....
(b) Cretinism	....	1	1	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	....	13	13	....	....	....	....	....	....
(b) Catatonic	....	4	4	....	....	....	....	1	1
(c) Paranoid	1	18	19	....	....	....	....	....	....
General Paresis	....	....	....	....	....	....	....	....	....
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	....	....	....	....	....	....	....	....	....
(c) Multiple Sclerosis	....	....	....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	1	1	....	....	....	....	....	....
(g) Cerebral Tumor, Abscess, Hemorrhage	....	....	....	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	....	4	4	....	....	....	....	1	1
(b) Pre-senile Delusional Psychoses	....	3	3	....	....	....	....	....	....
(c) Senile Dementia	....	73	73	....	....	....	....	2	2
Manic Depressive Psychoses.—									
(a) Manic States	....	8	8	....	....	....	....	....	....
(b) Depressed States	....	....	....	....	....	....	....	....	....
(c) Mixed States	....	9	9	....	1	1	....	....	....
Carried Forward	1	134	135	....	1	1	....	4	4

TABLE No. 9—ORILLIA—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	1	134	135	....	1	1	....	4	4
Paranoia	....	....	....	....	....	....	....	....	....
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	....	4	4	....	....	....	....	2	2
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	29	33	62	8	1	9	9	7	16
(b) Idiocy	17	13	30	1	1	2	15	12	27
Not Diagnosed	....	....	....	....	....	....	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	47	184	231	9	3	12	24	25	49

TABLE No. 10—ORILLIA.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	.....	7	.....	.....	1	2
From 1 to 2 months	.....	3	.....	1	.....	1
" 2 " 3 "	.....	5	.....	.....	.....	2
" 3 " 4 "	.....	6	.....	.....	.....	.....
" 4 " 5 "	.....	8	.....	.....	.....	3
" 5 " 6 "	.....	10	.....	1	.....	3
" 6 " 9 "	.....	14	.....	3	2	5
" 9 " 12 "	.....	160	.....	.....	.....	1
" 12 " 18 "	.....	45	.....	2	.....	.....
" 18 months to 2 years	.....	15	.....	.....	.....	3
" 2 to 3 years	.....	36	.....	2	.....	1
" 3 " 4 "	.....	49	.....	1	.....	3
" 4 " 5 "	.....	47	.....	.....	.....	2
" 5 " 10 "	.....	159	.....	.....	.....	3
" 10 " 15 "	.....	135	.....	.....	.....	6
" 15 " 20 "	.....	95	.....	.....	.....	4
" 20 years and upwards	.....	188	.....	.....	.....	6
Totals	.....	992	.....	10	3	49

ANNUAL REPORT OF THE MEDICAL SUPERINTENDENT FOR THE YEAR ENDING OCTOBER 31ST, 1917.

To W. W. DUNLOP, ESQ.,

Inspector of Hospital for Insane and Epileptics,

Parliament Buildings, Toronto, Canada.

SIR,—I have the honour to submit to you the Twelfth Annual Report for the Hospital for Epileptics, for the year ending October 31st, 1917.

We had remaining in residence November 1st, 1916, 206 patients. We admitted during the year 27 males and 16 females, total 43 patients. Total number under treatment during the year 249, being 128 males and 121 females. Total number discharged during the year 12, being 8 males and 4 females. Discharged improved, 7; discharged unimproved, 5. Total number who died during the year 26, being 19 males and 7 females. We had remaining in residence October 31st, 1917, 211 patients. The death rate is larger than usual, but the most of these had been afflicted for many years, and have been in a helpless and weakened condition for a long time.

IMPROVEMENTS.

These have been limited to the repairing and fitting up of our buildings, and a great deal of splendid work has been done. We have painted and generally improved the interior of all the buildings.

The grounds have been improved by the addition of shrubbery, and more flower beds added. The driveways have been fixed up.

FARM AND GARDEN.

Our returns from these were very satisfactory, considering the unfavourable season of cold and rain. A portion of our garden was completely washed out several times, yet we had an abundant supply of all garden products, except the berry crop; it was a failure. The farm crop turned out very well. The late potatoes were not so good and were affected somewhat by the rot. Hay, oats and barley yielded well. Roots were good. Corn was a splendid crop. The following table will show what we harvested from given acreage:

10	acres	Corn	155 tons
4	"	Mangolds	2,000 bushels
24	"	Oats	1,000 "
22	"	Barley	880 "
14	"	Potatoes	1,000 "
24	"	Hay	48 tons

IMPROVEMENT OF PATIENTS.

We have had the satisfaction of seeing a great many of our patients much improved, both mentally and physically. Seven have gone through the year without a seizure, and quite a few others have shown marked improvement.

A sad gloom was cast over our institution when it became known that our Inspector, Mr. Edwin R. Rogers, was dead. He always took a deep interest in

the work and welfare of the Hospital and was honoured and respected by all. We found him in all his work a thorough loyal official, deeply interested in the welfare, comfort and happiness of all connected with the Institution. He was a big kind-hearted man, full of honour and true to the highest principles of manhood. It was always a pleasure and inspiration to have him visit us, and to receive his wise counsel and assistance.

Conclusion.

In conclusion, sir, I wish to acknowledge your good advice and helpful assistance so generously given during the past year.

I have the honour to remain,

Your obedient servant.

J. J. Williams,

Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR EPILEPTICS, WOODSTOCK, FOR THE YEAR ENDING OCT. 31st, 1917.

TABLE No 1—WOODSTOCK.

Showing movements of patients in the Hospital for the official year ending Oct. 31st, 1917.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	104	104	208			
In Residence Oct. 31st, 1916				101	105	206
Admitted during year 1917 —						
By Warrant						
By Medical Certificate	27	16	43	27	16	43
Total number under treatment during year				128	121	249
Discharges during year:—						
As recovered						
As improved	4	3	7			
As unimproved	4	1	5			
As not insane						
Total number discharged during year	8	4	12			
Died	19	7	26			
Deported						
Eloped						
Transferred				27	11	38
Remaining in Hospital, Oct. 31st, 1917				101	110	211
Total number admitted since opening of Hospital				296	243	539
Total number discharged since opening of Hospital	114	77	191			
Total number died since opening of Hospital	77	53	130			
Total number deported since opening of Hospital						
Total number eloped since opening of Hospital						
Total number transferred since opening of Hospital	4	3	7	195	133	328
Total remaining in Hospital, Oct. 31st, 1917				101	110	211
Daily average population	101.06	107.02	208.08			
Collective days' stay of all patients in residence during year	37,085	39,141	76,226			
Number of applications on fyle	20	17	37			

TABLE No, 2—WOODSTOCK.

Showing social state and religion of patients admitted during the year and since opening of Hospital.

	Admissions of Year.			In Residence.			Admissions since opening.		
	Male	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.									
Single	21	15	36	88	85	173	241	193	434
Married	6	1	7	11	25	36	53	50	103
Widowed	.....	.....	.....	2	.....	2	2	.....	2
Divorced	.....	.....	.....	.....	.....	.....	.....	.....	.....
Separated	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	27	16	43	101	110	211	296	243	539
RELIGION.									
Baptists	.....	1	1	6	13	19	20	22	42
Congregationalists	.....	.....	.....	1	.....	1	1	.....	1
Episcopalian	3	7	10	21	34	55	67	68	135
Methodists	8	4	12	20	27	47	79	75	154
Presbyterians	5	2	7	25	21	46	65	45	110
Roman Catholics	3	2	5	12	8	20	28	18	46
Other Denominations	5	.....	5	11	4	15	28	9	37
Unascertained	3	.....	3	5	3	8	8	6	14
Totals	27	16	43	101	110	211	296	243	539

TABLE No. 3—WOODSTOCK.

Showing nativity of patients admitted during the year and since opening of Hospital.

Nativity.	Admissions of Year.			Admissions since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Total Admissions	27	16	43	296	243	539
Total born in Canada	22	12	34	243	193	436
Armenia						
Assyria						
Austria	1		1	1		1
Australia						
Belgium						
Bulgaria						
Central America						
China						
Denmark						
England	3	3	6	28	34	62
France						
Finland						
Galicia						
Germany				3		3
Greece						
Holland						
Hungary						
Ireland		1	1	6	7	13
Italy						
Japan						
Macedonia						
Other British Possessions						
Norway						
Roumania						
Russia	1		1	1	2	3
Scotland				6	5	11
South America						
Spain						
Sweden						
Turkey						
United States				8	2	10
West Indies						
Unascertained						
Totals	27	16	43	296	243	539

TABLE No. 4—WOODSTOCK.

Showing the occupation of those admitted during the year and since the opening of Hospital.

Occupation.	Admitted this year.			Since opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	1	.....	1	5	.....	5
Commercial:- Bankers, Merchants, Accountants, Clerks, Salesmen. Stenographers, Typewriters, etc.	2	1	3	23	4	27
Agricultural and Pastoral:— Farmers, Gardeners, Stock Men, etc.	4	.....	4	50	.....	50
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	2	.....	2	17	.....	17
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	3	1	4	20	16	36
Domestic Service:— Waiters, Cooks, Servants, etc.	.....	4	4	3	36	39
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	1	4	5	11	66	77
Miners, Marine Engineers, Railway Employees, Seamen, etc.	.....	.....	.....	1	.....	1
Laborers	9	.....	9	78	.....	78
No occupation	4	6	10	80	121	201
Unascertained	1	.....	1	8	.....	8
Totals	27	16	43	296	243	539

TABLE No. 5—WOODSTOCK.

Showing the Counties and Districts from which patients have been admitted during the year, and since opening of Hospital.

Counties and Districts.	Admitted during year.			Admitted since opening.			Warrant cases.						Remaining in residence.		
							Admitted during year.			Admitted since opening.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	....	....	....	2	2	4	....	....	....	1	1	2	1	2	3
Brant	1	1	2	8	7	15	....	....	....	....	....	....	3	2	5
Bruce	2	1	3	5	4	9	....	....	....	....	....	....	4	2	6
Carleton	3	1	4	6	8	14	....	....	....	....	....	....	3	3	6
Dufferin	....	....	....	4	5	9	....	....	....	....	....	....	2	1	3
Dundas	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....
Durham	....	....	....	3	....	3	....	....	....	....	....	....	1	....	1
Elgin	1	1	2	6	5	11	....	....	....	1	....	1	4	3	7
Essex	1	....	1	4	2	6	....	....	....	....	....	....	1	....	1
Frontenac	1	....	1	4	....	4	....	....	....	....	....	....	....	....	....
Glengarry	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Grenville	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....
Grey	1	2	3	4	6	10	....	....	....	....	....	....	2	4	6
Haldimand	....	....	....	1	....	1	....	....	....	1	....	1	....	....	....
Halton	....	....	....	4	1	5	....	....	....	1	....	1	1	1	2
Hastings	1	....	1	6	3	9	....	....	....	....	....	....	1	1	2
Huron	1	....	1	8	2	10	....	....	....	....	....	....	5	1	6
Kent	....	....	....	4	3	7	....	....	....	....	....	....	2	3	5
Lambton	....	....	....	12	9	21	....	....	....	1	....	1	1	2	3
Lanark	....	....	....	2	1	3	....	....	....	....	....	....	2	....	2
Leeds	....	....	....	....	3	3	....	....	....	....	....	....	....	2	2
Lennox and Addington	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
Lincoln	....	....	....	6	2	8	....	....	....	....	1	1	2	2	4
Middlesex	1	....	1	24	14	38	....	....	....	1	....	1	7	6	13
Muskoka District	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
Nipissing District	....	....	....	1	4	5	....	....	....	....	....	....	....	1	1
Norfolk	....	....	....	4	3	7	....	....	....	....	....	....	....	1	1
Northumberland	....	1	1	2	3	5	....	....	....	....	....	....	....	1	1
Ontario	....	....	....	1	8	9	....	....	....	....	....	....	1	2	3
Oxford	3	....	3	16	12	28	....	....	....	....	....	....	4	3	7
Parry Sound Dist	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
Peel	....	....	....	....	1	1	....	....	....	....	....	....	....	2	2
Perth	1	....	1	13	2	15	....	....	....	....	....	....	3	1	4
Peterborough	....	....	....	3	3	6	....	....	....	....	....	....	1	2	3
Prescott	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Prince Edward	....	....	....	2	1	3	....	....	....	....	....	....	....	....	....
Rainy River Dist	....	1	1	....	1	1	....	....	....	....	....	....	....	1	1
Renfrew	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....
Russell	1	....	1	2	1	3	....	....	....	....	....	....	1	1	2
Simcoe	....	....	....	10	8	18	....	....	....	1	....	1	1	5	6
Stormont	....	....	....	5	2	7	....	....	....	....	....	....	3	1	4
Thunder Bay Dist	....	....	....	4	....	4	....	....	....	3	....	3	3	....	3
Victoria	....	....	....	4	7	11	....	....	....	1	....	1	....	5	5
Waterloo	1	....	1	13	3	16	....	....	....	2	....	2	3	....	3
Welland	....	....	....	3	1	4	....	....	....	1	....	1	1	1	2
Wellington	1	1	2	5	7	12	....	....	....	....	....	....	2	4	6
Wentworth	1	....	1	16	19	35	....	....	....	....	....	....	7	10	17
York	6	7	13	71	74	145	....	....	....	5	5	10	28	31	59
Unascertained	....	....	....	5	1	6	....	....	....	....	....	....	1	1	2
Totals	27	16	43	296	243	539	....	....	....	19	7	26	101	110	211

TABLE No. 6—WOODSTOCK.

Showing the assigned causes of Insanity in the cases admitted during year.

Causes.	Men.	Women	Total.	Inherited Predisposition.			Un-ascertained.
				Men.	Women.	Total.	
Moral:—							
Adverse Conditions (such as loss of friends, business troubles, etc.)	.....	.....	.....	.....	.....	.....	.....
Mental Strain, Worry and Overwork (not included in above)	1	1	2	.....	.....	.....	.....
Religious Excitement	.....	.....	.....	.....	.....	.....	.....
Love Affairs, including seduction	.....	.....	.....	.....	.....	.....	.....
Fright and Nervous Shock	1	2	3	.....	.....	.....	.....
Physical:—							
Alcoholism	1	.....	1	2	1	3	.....
Sexual Excess	.....	1	1	.....	.....	.....	.....
Venereal Diseases	.....	.....	.....	.....	.....	.....	.....
Masturbation	1	.....	1	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	6	3	9	.....	.....	.....	.....
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	.....	.....	.....	.....	.....	.....
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	2	2	.....	.....	.....	.....
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	.....	.....	.....	.....	.....	.....	.....
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	1	.....	1	.....	.....	.....	.....
Senility	.....	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	.....	.....	.....	.....	.....	.....	.....
Lose of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	1	.....	1	.....	.....	.....	.....
Other Bodily Diseases	.....	.....	.....	.....	.....	.....	.....
Hereditary:—							
Congenital Defect	1	.....	1	.....	.....	.....	.....
Unascertained	10	6	16	2	.....	2	.....
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	23	15	38	4	1	5	.....

TABLE No. 7—WOODSTOCK.

Showing hereditary tendency to Epilepsy in patients admitted during the year and since the opening of the Hospital.

	Admitted during Year.			Since Opening.		
	Male	Female.	Total.	Male.	Female.	Total.
Paternal Branch	2	1	3	16	14	30
Maternal Branch	.....	.....	.....	21	14	35
Paternal and Maternal Branches	5	4	9	6	8	14
Collateral Branches	.....	.....	.....	17	14	31
No Hereditary Tendency	10	5	15	189	156	345
Unascertained	10	6	16	47	37	84
Total	27	16	43	296	243	539

TABLE No. 8—WOODSTOCK.

Showing summary of Probational Discharges during the year.

	Male.	Female.	Total.
Number granted Discharge	1	.....	1
Discharged, Recovered	.....	.....	.....
Discharged, Improved	.....	.....	.....
Discharged, Unimproved	1	.....	1
Died	.....	.....	.....
Returned to Hospital	1	8	9
Absent on Probation on October 31st, 1917	.....	.....	.....

TABLE No. 9—WOODSTOCK.

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Specific Infectious Diseases:—						
Typhoid Fever	.....	.....	.....	.....	.....	.....
Influenza	.....	.....	.....	.....	.....	.....
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....
Diphtheria	.....	.....	.....	.....	.....	.....
Erysipelas	.....	.....	.....	.....	.....	.....
Septicæmia	.....	.....	.....	.....	1	1
Dysentery	.....	.....	.....	.....	.....	.....
Syphilis	.....	.....	.....	.....	.....	.....
Tuberculosis	1	.....	1	3	1	4
Constitutional Diseases:—						
Rheumatism	.....	.....	.....	.....	.....	.....
Arthritis Deformans	.....	.....	.....	.....	.....	.....
Diabetes Mellitus	.....	.....	.....	.....	.....	.....
Diseases of the Digestive System:—						
Mouth, salivary glands	.....	.....	.....	.....	.....	.....
Pharynx	.....	.....	.....	.....	.....	.....
Tonsils	.....	.....	.....	.....	.....	.....
Œsophagus	.....	.....	.....	.....	1	1
Diseases of the Intestines:—						
Diseases of the Liver	.....	.....	.....	.....	.....	.....
Diseases of the Pancreas	.....	.....	.....	.....	.....	.....
Diseases of the Peritoneum	.....	.....	.....	.....	1	1
Diseases of the Respiratory System:—						
Diseases of the Nose and Larynx	.....	.....	.....	.....	.....	.....
Diseases of the Bronchi	.....	1	1	2	2	4
Diseases of the Lungs	1	1	2	7	7	14
Diseases of the Pleura	.....	.....	.....	.....	.....	.....
Diseases of the Circulatory System:—						
Diseases of the Pericardium	.....	.....	.....	.....	.....	.....
Diseases of the Heart	.....	.....	.....	4	3	7
Arterio-sclerosis	1	.....	1	1	.....	1
Aneurism	.....	.....	.....	.....	.....	.....
Diseases of the Blood and Ductless Glands:—						
Anæmia	.....	.....	.....	2	2	4
Pernicious Anæmia	.....	.....	.....	.....	.....	.....
Leucæmia	.....	.....	.....	.....	.....	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....
Diseases of the Genito-Urinary System	.....	.....	.....	.....	.....	.....
Carried Forward	3	2	5	19	18	37

TABLE No. 9—WOODSTOCK.—*Continued.*

Showing the causes of death of patients who died during the year and since the opening of the Hospital.

Cause of Death.	Died during year.			Since Opening.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brought Forward	3	2	5	19	18	37
Diseases of the Nervous System:—						
Diseases of the Nerves	.....	.....	.....	.....	.....	.....
Diseases of the Spinal Cord	.....	.....	.....	.....	.....	.....
Diseases of the Meninges	.....	.....	.....	.....	.....	.....
Organic Diseases of the Brain (Tumor, Abscess, Embolism, Thrombosis, Hemorrhage and other gross lesions)	.....	.....	.....	7	1	8
Functional Nervous Diseases (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	.....	.....	.....	2	.....	2
Epilepsy	16	5	21	46	30	76
Mental Diseases:—						
Exhaustion of Acute Mental Disease	.....	.....	.....	1	.....	1
Exhaustion of Chronic Mental Disease	.....	.....	.....	2	3	5
General Paresis	.....	.....	.....	.....	.....	.....
Intoxications:—						
Alcoholism	.....	.....	.....	.....	.....	.....
Morphinism	.....	.....	.....	.....	.....	.....
Metallic Poisoning	.....	.....	.....	.....	.....	.....
Heat Stroke	.....	.....	.....	.....	.....	.....
Debility of Old Age	.....	.....	.....	.....	.....	.....
Accident	.....	.....	.....	.....	.....	.....
Suicide	.....	.....	.....	.....	.....	.....
Surgical Diseases	.....	.....	.....	.....	.....	.....
Gynæcological Diseases	.....	.....	.....	.....	.....	.....
Malignant New Growths, or Cancer	.....	.....	.....	.....	1	1
Totals	19	7	26	77	53	130

TABLE No. 10—WOODSTOCK.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1917.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	.....	2	.....	.....	1	.....
From 1 to 2 months	.....	.....	.....	1	.....	2
" 2 " 3 "	.....	.....	.....	.....	3	2
" 3 " 4 "	1	2	.....	1	1	1
" 4 " 5 "	1	2	.....	1	.....	.....
" 5 " 6 "	1	7	.....	.....	.....	.....
" 6 " 9 "	1	1	.....	1	.....	.....
" 9 " 12 "	1	15	.....	.....	.....	.....
" 12 " 18 "	1	18	.....	.....	.....	.....
" 18 months to 2 years	3	12	.....	.....	.....	.....
" 2 to 3 years	3	15	.....	2	.....	1
" 3 " 4 "	4	21	.....	.....	.....	.....
" 4 " 5 "	5	15	.....	.....	.....	3
" 5 " 10 "	6	88	.....	1	.....	15
" 10 " 15 "	6	13	.....	.....	.....	2
" 15 " 20 "	4	.....	.....	.....	.....	.....
" 20 years and upwards	6	.....	.....	.....	.....	.....
Totals	43	211	.....	7	5	26

FORTY-EIGHTH ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals and Charitable Institutions

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 30th SEPTEMBER

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

Parliament Buildings,

Toronto, Dec. 3rd, 1917.

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I beg to submit herewith the Forty-eighth Annual Report upon the Hospitals and Charitable Institutions of Ontario, being for the official year ending September 30th, 1917.

I have the honour to be,

Your Honour's obedient servant,

W. D. McPHERSON, M.P.P.,

Provincial Secretary.

Office of the

Inspector of Prisons and Public Charities, Ontario.

Parliament Buildings, Toronto, Nov. 12th, 1917.

Sir,—I have the honour to transmit herewith, to be presented to His Honour the Lieutenant-Governor, the Forty-eighth Annual Report upon the Hospitals and Charitable Institutions, etc., for the official year ending September 30th, 1917.

I have the honour to be, Sir,

Your obedient servant,

W. W. DUNLOP,
Inspector.

The Honourable W. D. McPherson, M.P.P.,

Secretary of the Province of Ontario.

Toronto.

CONTENTS.

	PAGE
INTRODUCTION	11-33
Movements of patients, table showing	34-35
Collective and average stay of patients, table showing	36-37
Deductions to be made from aggregate stay of patients, table showing	38-39
Revenue of Hospitals, table of	40-41
Basis upon which statutory aid is granted	42-43
Maintenance expenditure, table of	44-45
Proportion of Maintenance of Hospitals paid by Government, table showing	46-47
Average cost per patient in each Hospital, 1905 to 1917	48-49
Grants earned by Sanatoria for Consumptives, table of	110

SEPARATE REPORTS UPON HOSPITALS:

Victoria Hospital, Almonte	50
Royal Victoria Hospital, Barrie	50-51
General Hospital, Belleville	51
General Hospital, Bowmanville	52
General Hospital, Brantford	52-53
Brant Sanatorium, Brantford	103-104
General Hospital, Brockville	53
St. Vincent de Paul Hospital, Brockville	54
Lady Minto Hospital, Chapleau	54-55
General Hospital, Chatham	55
St. Joseph's Hospital, Chatham	56
Cottage Hospital, Cobourg	56-57
Lady Minto Hospital, Cochrane	57
General and Marine Hospital, Collingwood	58
General Hospital, Cornwall	58-59
Hotel Dieu Hospital, Cornwall	59
Royal Alexandra Hospital, Fergus	60
McKellar General Hospital, Fort William	60-61
General Hospital, Galt	61
General and Marine Hospital, Goderich	62
Muskoka Cottage Sanitarium, Gravenhurst	104-105
Muskoka Free Hospital for Consumptives, Gravenhurst	105
General Hospital, Guelph	62-63
St. Joseph's Hospital, Guelph	63
City Hospital, Hamilton	64
St. Joseph's Hospital, Hamilton	64-65
Mountain Sanitarium, Hamilton	105-106
Providence Hospital Haileybury	65
General Hospital, Ingersoll	66
General Hospital, Kenora	66-67
St. Joseph's Hospital, Kenora	67
General Hospital, Kincardine	67-68
General Hospital, Kingston	68
Hotel Dieu Hospital, Kingston	69
Essex Tuberculosis Hospital, Kingsville	106
Kitchener and Waterloo Hospital, Kitchener	69-70
General Hospital, London	70
St. Joseph's Hospital, London	70-71
Queen Alexandra Sanitarium, London	107
Ross Memorial Hospital, Lindsay	71
General Hospital, Mattawa	72
General Hospital, Midland	72-73
Lady Minto Hospital, New Liskeard	73
General Hospital, Niagara Falls	74
Queen Victoria Hospital, North Bay	74-75
General Hospital, Orangeville	75
General Hospital, Orillia	76
General Hospital, Oshawa	76-77

SEPARATE REPORTS UPON HOSPITALS.—*Continued.* PAGE
General Protestant Hospital, Ottawa 77
Roman Catholic Hospital, Ottawa 78
Maternity Hospital, Ottawa 78-79
Misericordia Maternity Hospital, Ottawa 79
St. Luke's General Hospital, Ottawa 80
Royal Sanatorium, Ottawa 107-108
General and Marine Hospital, Owen Sound 80-81
General Hospital, Parry Sound 81
St. Joseph's Hospital, Parry Sound 81-82
General Hospital, Pembroke 82
The Cottage Hospital, Pembroke, ... 83
General Hospital, Penetanguishene 83-84
Nicholls' Hospital, Peterborough 84
St. Joseph's Hospital, Peterborough 84-85
C. E. Englehart Hospital, Petrolea 85-86
Railway, Marine and General Hospital, Port Arthur 86
St. Joseph's Hospital, Port Arthur 86-87
General Hospital, Port Hope 87-88
Victoria General Hospital, Renfrew 88
General and Marine Hospital, St. Catharines 88-89
Consumptive Sanitarium, St. Catharines 108
Amasa Wood Hospital, St. Thomas 89
General Hospital, Sarnia 90
General Hospital, Sault Ste. Marie 90-91
Public Hospital, Smith's Falls 91
St. Francis' Hospital, Smith's Falls 92
General Hospital, Stratford 92-93
General Hospital, Strathroy 93
St. Joseph's Hospital, Sudbury 94
General Hospital, Toronto 94-95
Grace Hospital, Toronto 95
Hospital for Sick Children, Toronto 96
Orthopedic Hospital, Toronto 96-97
The Preventorium, Toronto 108-109
St. John's Hospital, Toronto 97
St. Michael's Hospital, Toronto 98
Wellesley Hospital, Toronto 98-99
Western Hospital, Toronto 99
Women's College Hospital, Toronto 100
General Hospital, Walkerton 100-101
General Hospital, Welland 101
Toronto Free Hospital for Consumptives, Weston 109-110
Hotel Dieu Hospital, Windsor 102
General Hospital, Wingham 102-103
General Hospital, Woodstock 103

CITY HOUSES OF REFUGE 111
Sex of inmates and their former residence 111
Table showing names and operations of Refuges 112
Aggregate and average stay of inmates 113
Table of amounts expended for Maintenance 114
Grants to Refuges for 1917, table showing 115

SEPARATE REPORTS UPON REFUGES 116-137
Home for the Friendless, Belleville 116
The Widows' Home, Brantford 116
Home for the Friendless, Chatham 117
St. Paul's Home for the Aged, Cornwall 117
House of Providence, Dundas 118
Elliott Home, Guelph 118
House of Providence, Guelph 119
Aged Women's Home, Hamilton 119
Hamilton House of Refuge, Hamilton 120
St. Peter's Infirmary, Hamilton 120
Home for Friendless Women and Infants, Kingston 121
House of Refuge, Kingston 121
House of Providence, Kingston 122

SEPARATE REPORTS UPON REFUGES.—*Continued.* PAGE
Aged People's Home, London 122
House of Providence, London 123
London Convalescent Home, London 123
Victoria Home for Incurables, London 124
Monastery of Our Lady of Charity Refuge, Ottawa 124
Ottawa Home for Friendless Women, Ottawa 125
The Perley Home for Incurables, Ottawa 125
Protestant Home for the Aged, Ottawa 126
Protestant Orphans' Home, Refuge Branch, Ottawa 126
St. Charles' Hospice, Ottawa 127
St. Patrick's Asylum, Refuge Branch, Ottawa 127
Peterborough Protestant Home, Peterborough 128
St. Joseph's House of Providence, Peterborough 128
Thomas Williams Home, St. Thomas 129
District of Algoma House of Refuge, Sault Ste. Marie 129
Aged Men's Home, Toronto 130
Aged Women's Home, Toronto 130
The Church Home for the Aged, Toronto 131
Good Shepherd Female Refuge, Toronto 131
The Haven and Prison Gate Mission, Toronto 132
Hillcrest Convalescent Home, Toronto 132
Toronto House of Industry, Toronto 133
House of Providence, Toronto 133
Humewood House Association, Toronto 134
Industrial Refuge, Toronto 134
Julia Greenshields Home, Toronto 135
Salvation Army Rescue Home, Toronto 135
Toronto Hospital for Incurables, Toronto 136
Victor Home for Young Women, Toronto 136
Home for the Friendless, Windsor 137

ORPHAN ASYLUMS 139-152
Sex, previous residence, etc., of the children 139
Total number maintained 140
Cost of maintaining Orphanages, table of 141
Aggregate stay of inmates 141
Grants to Orphan Asylums for 1917, table of 142

SEPARATE REPORTS UPON ORPHAN ASYLUMS 143-152
Nazareth Orphanage, Cornwall 143
St. Joseph's Orphanage, Fort William 143
Protestant Orphan Asylum, Hamilton 143
Boys' Home, Hamilton 144
Girls' Home, Hamilton 144
Infants' Home and Home for the Friendless, Hamilton 144
St. Mary's Orphan Asylum, Hamilton 145
Salvation Army Rescue, Hamilton 145
Orphans' Home and Widows' Friend Society, Kingston 145
St. Mary of the Lake Orphanage, Kingston 146
Kitchener Orphanage, Kitchener 146
Protestant Orphans' Home, London 146
Roman Catholic Orphans' Home, London 147
Salvation Army Rescue Home and Children's Shelter, London 147
Ottawa Boys' Home, Ottawa 147
Protestant Orphans' Home, Ottawa 148
St. Joseph's Orphanage, Ottawa 148
St. Patrick's Orphanage, Ottawa 148
Salvation Army Rescue and Children's Home 149
St. Vincent's Orphanage, Peterborough 149
Loyal True Blue Orphanage, Picton 149
St. Agatha Orphan Home, St. Agatha 150
Protestant Orphans' Home, St. Catharines 150
Boys' Home, Toronto 150
Girls' Home, Toronto 151
Home for Incurable Children, Toronto 151
Infants' Home and Infirmary, Toronto 151

SEPARATE REPORTS UPON ORPHAN ASYLUMS.—*Continued.* PAGE
Protestant Orphans' Home, Toronto 152
Roman Catholic Orphan Asylum, Toronto 152
Working Boys' Home, Toronto 152

COUNTY HOUSES OF REFUGE 153
County of Brant House of Refuge 153
" Bruce " 153
" Elgin " 153
" Essex " 154
" Grey " 154
" Haldimand " 154
" Hastings " 155
" Huron " 155
" Kent " 155
" Lambton " 156
" Lanark " 156
" Leeds and Grenville House of Refuge 156
" Lincoln " 157
" Middlesex " 157
" Norfolk " 157
" Northumberland and Durham " 158
" Ontario " 158
" Oxford " 158
" Peel and Halton " 159
" Perth " 159
" Peterborough " 159
" Prescott and Russell " 160
" Prince Edward " 160
" Simcoe " 160
" Stormont, Dundas & Glengarry " 161
" Victoria " 161
" Waterloo " 161
" Welland " 162
" Wellington " 162
" Wentworth " 162
" York " 163

Hospitals and Charitable Institutions

In presenting the forty-eighth annual report on the Hospitals and Charitable Institutions for the year ending September 30th, 1917, I beg to state that there are at present in Ontario:—

94 Public Hospitals, including 11 Sanatoria for Consumptives.
68 Private Hospitals.
38 Refuges.
29 Orphanages.
3 Homes for Incurables.
2 Convalescent Homes.
31 County Houses of Refuge.

These have, as far as possible, received official visits of inspection during the year, and those entitled to Government aid in accordance with the Statute have shared in the grants voted by the Legislature for Hospitals and Charities.

The Hospitals.

The record of the year indicates the continued success and progress of the Hospitals of Ontario:

Number of patients in the hospitals, October 1st, 1916	5,287
Number of patients admitted during the year	91,013
Number of births in the hospitals during the year	7,365
Total number under treatment during year	103,665

The above figures do not include those who received medicine and treatment as outdoor patients.

Number of deaths during the year	5,651
Percentage of deaths to number under treatment	5.45
Total number of days' stay in the hospitals	1,984,461
Provincial grant to hospitals for the past year	$318,450 27
Amount received from all sources during the year	3,368,901 11
Subscriptions, donations, etc., during the year	332,929 09
Total expenditure for hospitals (including capital account, $637,109.79) during the year	4,450,957 98
Average cost for each patient per day	2.02
Percentage of Provincial grant to total maintenance expenditure	.140

Provincial Aid to Hospitals.

1. A Provincial grant is made for all patients in a hospital during the first ten years of its existence at the rate of twenty cents per day, irrespective of what sum is contributed by the patients themselves. From August 10th, 1917, this grant has been increased to thirty cents per day.

2. After a hospital has been in existence for ten years the grant is paid only for patients for whose maintenance $7.00* per week or less is contributed.

3. In all cases the limit is 120 days, and if the patients remain in the hospital longer than that period the refuge rate of seven cents per day is allowed.

4. Children over one year and under twelve years are allowed for at the rate of seven cents per day.

5. No allowance is made for infants under one year of age.

Aid to Sanatoria for Consumptives.

1. A grant of $4,000 on the erection and satisfactory equipment of the necessary buildings.

2. A grant of three dollars per week for the maintenance of each indigent patient.

These grants to be in consideration of proper accommodation being provided, and only to assist in the maintenance of indigent patients coming from the Province of Ontario. There were 2,638 patients cared for in the 12 different Sanatoria for Consumptives during the past year.

THE YEAR'S WORK IN THE HOSPITALS.

The number of patients cared for in the Public Hospitals of Ontario during the past year was 103,665.

The total expenditure for maintenance and equipment during the year was $3,863,848.19.

During the present year many difficulties have confronted those responsible for the management and administration of the affairs of our public institutions in Ontario. Many members of the medical and nursing staff, and many from the ranks of the other workers are overseas, or are so occupied with double work at home that they cannot give their aid as they formerly did, and will do again, to the splendid work that is carried on in our public charities. Besides, the scarcity and increased cost of fuel, food, drugs, and almost everything else has caused it to be harder than before to make ends meet. The Board of Governors of Toronto General Hospital, in March, 1917, stated that their cost rate per patient per day was $2.17, and further, that this figure compares favourably with the corresponding figures from other large hospitals as follows:—

Royal Victoria Hospital, Montreal	$2.20
Montreal General Hospital, Montreal	2.53
Hospital for Sick Children, Toronto	2.26
Winnipeg General, Winnipeg	2.47
Johns Hopkins, Baltimore	3.41
Massachusetts General, Boston	3.31
Presbyterian Hospital, New York	3.41

The cost rate per day has now increased to over $3.00 at Toronto General Hospital, and to $2.51 per day at the Hospital for Sick Children, Toronto.

* This has now been increased to $8.75 in the case of municipal patients.

In addition to all difficulties the general condition of the labour market, with workers so difficult to find, bears hardly upon public charities who are always needing domestic and other helpers, and requiring men to make repairs, alterations or additions, new plumbing, or something else. But in spite of all this, the word has been "Carry On" and workers have carried on with energy and success, and inmates have not suffered. We believe that those who have done so well and been so faithful will go on and do still better, if possible, until, with the righteous victory for which we pray, a rightful and abiding peace returns, and more help and more helpers come to their aid.

Typhoid Fever.

During the year 1916 there were at least six or seven small epidemics of typhoid fever in the Province, and probably about the same number have occurred this year. It is still the rule and not the exception, to find, during the official inspection, especially in the hospitals situated in the more distant parts of the Province, one or more patients with typhoid fever in the wards. The duty of the hospital authorities does not end with the care and nursing of the patient. This is their primary duty. This is what a hospital is for. But it is for more than this. The hospital authorities should see that the Local M.O.H. and the District M.O.H. are at once notified of the case, and they should never rest until the source of the infection, whether it be by "typhoid carrier," milk, or water, or by direct infection, is accurately ascertained and placed beyond a doubt.

One of the orphanages this year arranged that the children should spend a month or two at a place in the country. This is a great advantage to the children and is highly approved of by everyone. Before many weeks five cases of typhoid fever developed, and the assistant matron, a devoted and valuable officer, died from the disease. It was found that the proprietor of the dairy from which the milk was procured was a typhoid carrier, and when the matter was investigated, it was shown that the disease had been transmitted by him to many persons in the neighbourhood. This state of affairs had existed for some years and shows that public opinion needs to be further educated till each one recognizes and accepts his or her share of responsibility for the public health. Typhoid fever is preventable. It should be prevented, and every case must be reported and properly cared for. The source of infection must be found out and removed, and every precaution must be taken to prevent the occurrence of any more cases.

Private Hospitals.

On account of recent legislation the number of private hospitals is somewhat reduced this year. In October, 1916, a number of private hospitals which cared for alcoholic patients and chronic inebriates withdrew their applications for the annual license required by the law. This is a striking proof of the good already accomplished by this legislation, which has benefited all the public institutions of the Province, more or less.

Sanatoria.

During the past year 1,729 patients have been admitted to the 11 sanatoria in the Province. This does not of course include the large number of returned soldiers who are under the care of the Military Hospitals Commission.

The most important event in the work of many of our sanatoria in the past year has been the care and treatment of our soldiers, and the extension and im-

provement of the buildings and equipment with this aim in view. With the exception of one or two sanatoria which were not large enough to afford accommodation required by the Military Hospitals Commission almost all the sanatoria have now provided new buildings and other accommodation for returned soldiers, officers and enlisted men suffering from tuberculosis.

Where such an agreement has not been found advisable the sanatoria have placed any beds which they could spare at the service of the Military Hospitals Commission and the patients under their care.

The sanatoria and the education of the public, in which they are greatly helped, as well as the efforts of the Provincial Board of Health and the medical profession, have resulted in a marked decrease in the death rate in tuberculosis from year to year.

Compared with the total number of those in the Province suffering from tuberculosis, it will be seen that only a comparatively small percentage are receiving care. The preference should be given to early and curable cases. More careful discrimination should be made between the curable case requiring a long period of care and treatment, the incipient case, needing instruction chiefly and a short period of residence, and the cases which show no tendency to improvement and should be cared for elsewhere.

There is a general desire and hope in the community to improve its methods of giving to public charities and also to improve the methods of spending the money provided. In the capital city of this Province alone the figures for 1915, the latest available at the time of writing, show an annual expenditure of $762,659.12 compared with an expenditure of $106,996.62 in 1905, for the city's public charities. The increased interest taken in this matter, and the wish to deal with causes rather than with effects, is a hopeful sign.

Provisional Houses of Refuge in Judicial Districts.

The need of Houses of Refuge in Provisional Judicial Districts has been serious for some years and is becoming more urgent. Many requests have been made for further legislation, and the general opinion is frequently expressed throughout the Province that the County Houses of Refuge Act forms a good precedent, and has been found to work successfully and to be a great benefit to the municipalities. The amount of good done by these Houses of Refuge is great and many of them are model institutions, and a source of legitimate pride and satisfaction to the County Council and the House of Refuge Committee.

On the other hand, the neglect of the aged and friendless poor where there is no House of Refuge is a reproach to us all. The report of the Provincial Board of Health published in 1917 contains on page 26 the following paragraph:—

"Need of Houses of Refuge.

"Last winter I found a man claiming to be about 100 years old living in a small shack in unorganized territory; he was sick and without either fuel or food. I had him removed to a neighbour's and cared for until recovered. I have known of a number of similar cases where indigent sick have been a burden on their neighbours. This should not be, as this North Country should be provided with Houses of Refuge for that purpose."

The House of Refuge at Sault Ste. Marie is the only House of Refuge in Ontario which is situated in a Provisional Judicial District.

Orphanages.

During the year the 29 orphanages of Ontario cared for 2,159 children. The fathers of a number of these children are overseas and their mothers not living, so the children have been placed in these institutions for home care and are paid for regularly by the soldier father. It is to be hoped that the children's own homes, thus temporarily closed, will be re-opened after the war.

As a rule, the children in the orphanages are in good health and are well cared for.

The Mowat Memorial Sanatarium, Kingston.

The Sir Oliver Mowat Memorial Sanatarium is a Military Hospitals Commission Institution.

Fire Prevention.

Only one serious fire has occurred in any of our institutions during the year—the fire at Grace Hospital, Toronto. There was fortunately no loss of life. The origin of the fire remains unknown. The nurses and staff acted with courage, promptitude and good judgment, and as a result of their efforts all the patients were soon removed to places of safety. The hospital was speedily repaired and the opportunity was taken to make some improvement in the building.

Increased Food Production.

Early in the year a letter was addressed to the superintendent of every hospital, refuge, orphanage, and other public charity, drawing special attention to the great need of increased production of food in 1917, and asking that each one would do everything possible by securing the co-operation of all inmates and officers able to work, cultivating every available inch of ground, renting ground, and employing improved methods to produce more food. The response has been a splendid one and has far exceeded even the highest expectations entertained at the beginning of the year. Best of all, it has shown the people what they could do, and has led to the resolve that the still greater need of 1918 will be met by still greater provision. In answer to a request, most of our public charities have sent a short general statement of the work of the year, including food production. Brief extracts from these statements appear in the following pages and give some idea of the good work that has been carried on.

Toronto Free Hospital for Consumptives, Weston.

Two new buildings have been erected—the "Davies Cottage" for infants, and a new wing attached to Main Building, providing forty-four beds.

New equipment has been provided, consisting of an X-Ray machine, with fluoroscope and stereoscope, a high frequency apparatus, and ultra-violet ray lamps.

The farm produce is as follows:

Pork to the value of $3,338.43 has been produced during the year, giving a net profit of $1,120.90; eggs and fowl to the value of $3,208.87, with a net profit of $813.44, and vegetables to the value of $769.93, from which the net profit derived was $103.74.

Total net profit, $1,776.82.

Muskoka Free Hospital for Consumptives, Gravenhurst.

Farm Industries.—We have placed an additional acreage under cultivation and have greatly increased our output of vegetables, especially potatoes. We have added a third building to our piggery: the latter being used for breeding purposes.

Water Supply and Sewage Disposal.—We have cleaned and completely relaid the septic bed at the Muskoka Free Hospital, and have, in addition, built a duplicate water filter to handle the supply from our spring.

We are, at the present time, caring for an increasing number of officers (twelve at present) at the Muskoka Cottage Sanitarium, and enlisted men, of whom we have thirty-seven, at the Muskoka Free Hospital.

Royal Ottawa Sanitarium.

The visit of Their Excellencies, the Duke and Duchess of Devonshire, who spoke to each patient, giving flowers and a kindly and encouraging message, was one of the important events of the year.

The hennery has been completely renovated at an expense of over a thousand dollars. A practical woman has been placed in charge and two hundred and fifty "Barred Plymouth Rocks" purchased.

This season we leased an adjoining field and cultivated six acres as a garden with good results. We erected a substantial cement root house, where we may now store our winter supply of vegetables.

Brant Sanatorium, Brantford.

Improvements have been made in our main buildings and a chicken house and garden have also been added to the premises.

The Horticultural Society, Brantford, placed a beautiful rose bed in the centre of our front lawn which gives promise of great beauty next season.

The Daughters of the Empire Preventorium.

Our cloak room accommodation has now been increased and each child has a heated locker. This makes the children more comfortable and the work of supervision easier.

We planted a plot about 50 feet x 150 feet which proved most productive providing an abundance of fresh vegetables and a surplus for storage. Estimated product of plot: 30 bags of potatoes, 5 bags carrots, 5 bags parsnips, 8 bags beets, 1 bag onions, 2½ bushels peas, 2½ bushels beans, 6 bushels tomatoes, 100 cabbage, 175 marrow, 2 pecks cucumbers, and radishes and lettuce.

With this at our command we have been able to decrease our consumption of wheat and meat, while still providing wholesome nourishment.

Essex County Sanatorium, Union-on-the-Lake.

Two new wings for male and female patients have been erected during the past year, increasing our capacity from twenty to fifty beds.

The Administration Building has been re-modelled and a large addition made to it at an approximate cost of $35,000.

This past year three and one-half acres of land was cultivated, producing 147 bushels of corn, 170 bushels of potatoes, 2 bushels of beans, 700 winter cabbage, and other vegetables.

We have 200 hens which have laid 1,023 dozen eggs during the past year.

We note particularly the ever increasing change of attitude and interest taken by the general public, especially the rural population, in this rural sanatorium, which is thirty miles from the nearest city.

The Mountain Sanatorium, Hamilton.

During the year our new infirmary was completed: it contains accommodation for seventy patients, and it was thought that it would answer the needs of Hamilton for many years to come, but owing to the difficulties experienced by the military authorities in finding suitable accommodation for returned tuberculous soldiers, they persuaded our Board and the Hamilton City Council to grant them the use of a part of this building for military purposes. In return for this concession the Military Hospitals Commission agreed to put up permanent pavilions, with accommodation for sixty-four patients, and a dining-room to accommodate ninety patients, with a second story that will accommodate sixteen employees.

In addition to these permanent buildings which are of brick, and practically fire-proof, the Commission has erected a Vocational Building for the training of soldiers, and three temporary shacks, each with accommodation for ten patients. This provides accommodation at the new building for one hundred and sixty-four patients; and the Commission has the right to erect, and furnish further temporary accommodation until they have a total of two hundred and fifty patients under treatment at this Institution.

Patients were first received into the new infirmary on December 5th, 1916, and at the present time there are under treatment twenty civilians and one hundred and forty soldiers.

It was found necessary to enlarge the shacks, both for adults and children, and we are now accommodating one hundred and fifty patients, including fifty-six children.

We must enlarge and increase our farm land and production. We had a thousand bushels of grain in addition to vegetables and other crops.

The Haven and Prison Gate Mission, Toronto.

A small verandah, with southern exposure, and a large sun-room have been added to our nurseries.

The laundry work has increased thirty per cent.

Our garden space is limited, but the girls used what was available to very good advantage; they grew enough beets, tomatoes and onions to supply their own table frequently and also furnished the material for quite a little canning and pickling.

Home of the Friendless and Infants' Home, Hamilton.

Thirty-two children of soldiers overseas, have been and are being cared for. A new dormitory for infants has been added, also a lavatory and diet kitchen. A new departure was made last year in planting vegetables, in a small space of our yard, which yielded well, supplying the household with vegetables.

This Home has cared for, and now gives paid employment to several young women of feeble mind.

Aged Women's Home, Hamilton.

The Home is taxed to its utmost, and there are over thirty applications for admission on file.

Our garden produce (1917) is 118 bushels of potatoes, carrots, beets, spinach, onions, turnips, parsnips and Swiss chard; 290 ears of corn; 662 heads of cauliflower, lettuce and cabbage; over 61 baskets (11-quart baskets) of tomatoes, cucumbers, beans, peas and pickle-onions; 63 marrows, 12 pumpkins, 20 melons; 23 quarts of radishes and a quantity of rhubarb. We hope for still greater results next year.

Boys' Home, Hamilton.

We tried to have a vegetable garden, but it was not very successful. However, we intend trying again next year, hoping we may have more favourable weather.

The Aged Women's and Aged Men's Home, Toronto.

Early in the spring the inmates of the Aged Men's Home began to do their bit. One was a practical gardener. There is no land about the Home itself, but the McAlpine Tobacco Company loaned a fine vacant lot. The Rotary Club put it in good order. The men set to work and planted it with potatoes, beans, corn and other things, and carefully tended their garden. The beans were the first fruits and the first picking was sent to the aged women. The corn followed, and a fine potful was sent in to the girls of the Industrial Refuge; then came the potatoes, of which the men were justly proud—forty bags being produced.

In the Aged Women's Home war activities took the form of knitting socks for the soldiers. One of the inmates has knitted six hundred pairs of socks since the war began. She is past the three score years and ten, but active and alert, and eagerly does her part in the great war struggle.

Aged People's Home, London.

We cultivated all our ground, and succeeded in producing about 345 bushels of potatoes, tomatoes, carrots, beets, onions, turnips and other vegetables, thus giving the inmates good, wholesome, fresh vegetables.

The inmates have knitted one hundred and seventy-eight pairs of socks for the soldiers.

The Elliott Home, Guelph.

The production of our garden in 1917 is the largest we have ever had; 436 baskets of tomatoes, peas, beans, turnips, onions, carrots, beets, parsnips, potatoes, black currants, red currants and gooseberries; six bushels of spinach and lettuce; 30 dozen radish and six dozen corn; 265 head of cabbage and cauliflower; 24 vegetable marrow; 24 pumpkins and 40 quarts of raspberries.

Good Shepherd Female Refuge, Toronto.

A beautiful new chapel has been completed and opened; it is airy, bright, spacious and lofty.

A number of kind friends and benefactors gave the inmates a moving picture entertainment five or six times during the winter, and these they enjoyed greatly. Many of our inmates have fathers, brothers, or other near relatives in the trenches.

Boys' Home, Toronto.

One of our buildings, part of which had not been used for some time, was refitted and furnished for the use of boys over fourteen years of age, who are in positions in the city and still under the care of the Home. By this plan, the Board of Management is able to keep in touch and assist them when they make their first venture into the working world.

During the winter months a number of boys learned to knit, and socks, scarves and wristlets were sent to friends overseas.

All available space in the garden was cultivated, and the results were most satisfactory. With the exception of the planting, the work was done by the small boys, under supervision, and many happy hours were spent with the hoe and the rake.

The older boys spent the summer camping and helping the farmers at Vineland.

The House was kept supplied with vegetables from July until the end of the year; thus lowering considerably the cost of maintenance. All surplus vegetables were canned for winter use.

The Girls' Home, Toronto.

During the past year we have had installed in the Home a dental chair, with all equipment, for the exclusive use of the children in the Home.

Thrift has been emphasized by the use of vegetables grown in the children's own small gardens.

We are very grateful to Mr. R. J. Fleming, of the Street Railway Company, for several street car rides, and for free transportation of the children to and from the Exhibition; and also to the management of the Exhibition for free entrance to the grounds.

Home for the Aged Friendless and Infirm Persons, Kingston.

The equipment of the house has been improved; a new tool house has been built, and additional land has been purchased.

We have raised thirty-three ducks, and over one hundred and fifty chickens; and the produce of our garden has increased two hundred per cent. over that of last year. We had 70 bushels of carrots, 20 of beets, 6 of beans, 300 of potatoes, 52 of tomatoes, 6 of onions, 25 of parsnips, 40 of turnips and 30 of buckwheat; 646 heads of cabbage; 340 pumpkins, 58 squash, 25 citrons, 15 watermelons, 1,764 cucumbers, and 3,762 ears of corn; besides one hundred pounds each of sun-flower seeds and flax seeds. After paying for ploughing, seeds, etc., our profit on the garden will be over $900.00.

The Home for Incurable Children, Toronto.

Our girls have knitted two sleeveless sweaters, seventeen hoods, two trench caps, one pair of wristlets, and two wash cloths for the Belgian children.

So pleased was the Belgian Relief Committee with these articles that one of their number sent $25.00 to buy for these knitters anything they would like for themselves, but at their request, it was expended in purchasing more wool.

Notwithstanding all the patriotic demands made upon their incomes, our friends have not forgotten the little children in this Home.

The Home for Incurable Children, London.

One of our men cultivated a piece of ground 35 by 100 feet, and raised a good supply of vegetables.

One of our inmates who is blind has knitted sixteen pairs of socks for the soldiers.

Home for the Friendless, Chatham.

This year's improvements include a fine refrigerator and a concrete floor in the main cellar.

We grew enough in our garden of three-quarters of an acre to supply the Home with vegetables throughout the summer and fall: the amount it yielded includes 73 bushels of potatoes, carrots, parsnips, beets, onions and turnips; 200 heads of cabbage, 25 squash; 10 citrons, tomatoes, corn, spinach, cucumbers, peas, beans, radishes, lettuce, and of grapes, two bushels.

House of Providence, Kingston.

Our chief improvement is a new refrigerating plant.

We had two acres of land under cultivation, but owing to the heavy June rainfalls returns are not as great as we at first anticipated. The total is 40 bushels of potatoes, 30 of tomatoes, 8 of turnips, 5 of carrots, 5 of parsnips, 4 of beets, 5 doz. cauliflower, 6 dozen celery, besides onions, lettuce, peas, beans, etc., in season. At least this will encourage us to renewed effort.

House of Providence, Dundas.

The contract for a new elevator has been given out, the elevator to be ready for Christmas. The produce of our garden was increased by about fifty per cent., except the fruit, which was a very poor crop. We had no apples.

House of Providence, London.

We have a new boiler which adds to the efficiency of the heating plant.

We strove to "do our bit" this year in the way of garden production. Almost all our lawn was under cultivation in consequence of which we have over forty bushels of vegetables, potatoes, carrots, etc.

House of Providence, Peterborough.

Our grounds and cement walks have been improved. The use of half an acre of land was given us, in which we planted potatoes, and harvested enough together with those grown on our own land to supply the institution for the greater part of the year.

Humewood House, Toronto.

Our ground of two acres (cultivated entirely by the girls with the exception of the ploughing) yielded fairly well, and we obtained a supply of vegetables for the winter.

The Industrial Refuge, Toronto.

The girls had a small garden, prepared by the Rotary Club, from which some lettuce, onions, etc., have been used at their own table; and they have also begun a small poultry department, with fifteen chickens.

The class in physical training is continued with good results, and in the summer the girls have basket-ball and other games in the garden.

The Julia Greenshields Home, Toronto.

We planted all our available space in pumpkins, squash, and parsley, and had good results, though our ground is full of gravel and most of our space is required for laundry purposes.

Mount St. Joseph, London.

We have cultivated eleven acres this year, three acres being new ground; and have obtained 495 bushels of potatoes, beans, peas, tomatoes, carrots, beets, parsnips, onions, corn, turnips, cauliflower and cabbage. We had also, five bushels of pears and one hundred quarts of berries.

The Perley Home for Incurables, Ottawa.

To quite an appreciable extent the Home has benefited from the widespread custom of utilizing waste lands for gardening purposes since a considerable amount of very welcome vegetables has been given to the Home from such sources and your Directors are pleased to believe that more is to follow.

The Peterborough Protestant Home.

The average health of the inmates has been better than usual—the visits of the doctor have been rare indeed this year.

Our garden has been very successful. We have about six acres altogether here with large lawns and several flower beds but a gentleman accustomed to making such estimates, valued our vegetable garden at $500.00. In the early spring, I secured from the Ontario Agricultural College some potatoes for seed. From 12 potatoes of the early Eureka variety, planted May 7th and harvested September 10th, we had 73 pounds uniformly excellent with a very small proportion of small potatoes. The other variety Davies Warrior were somewhat later, but compared favourably as to productiveness. Both these kinds we are keeping for seed.

We were obliged this year to build a new root house which, owing to the high price of building materials and labour, cost us about $600.00. However, it is commodious and convenient, and should prove very valuable for years to come.

Protestant Home for the Aged, Ottawa.

The report of garden produce for the year is 74 bags of potatoes, 20 of parsnips, 10 of carrots, 4 of onions, 2 of turnips, 6 of sugar, and 2 of table beets: 75 pumpkins, 110 cabbages, spinach, corn, marrows and other vegetables in season, besides a plentiful supply of small fruits, enough for our needs during the summer and which enabled us to preserve 150 pounds. All our land was cultivated, about one and a half acres.

We have made a poultry house this year, which accommodates 50 fine birds (white wyandottes), in which many of the old men take a great interest.

Our heating plant has been overhauled, and two new boilers have been installed, costing about $1,150.00.

Salvation Army Rescue Home, London.

We have begun the erection of a new Maternity Hospital costing about $45,000, and accommodating 30 patients.

We have not been able to obtain very much garden produce out of a small plot of ground worked for the first time this year, but we have secured about eight bags of potatoes, two bushels of tomatoes and one sack of onions.

We had 13 fowl and have raised 29 chickens.

Salvation Army Rescue Home, Toronto.

We have earned and received in cash $767.47 over and above our earnings of the previous year, by needle work. We have produced a small quantity of potatoes, cabbage and tomatoes in our back garden, but our ground capacity for cultivation is very limited.

Our increased earnings have permitted us not only to pay for the year's fuel in advance, but also to contract this fall with two farmers for the year's supply of vegetables and four pigs to be killed and cured, so that whatever the shortage may be, we are provided with a sufficiency of food for several months, half a ton of beans being included in the produce.

Salvation Army Rescue Home, Hamilton.

Six girls in the last four months have been sent to us from the Courts; they have stayed here until they have proved themselves, and then we got them into service and their mistresses have said they are doing well. The girls themselves come back twice a week to the Home.

St. Charles Home, Ottawa.

An expenditure of $250.00 placed our ice house in good order and our new laundry begun in April is now complete at a cost of $25,000.00.

It consists of a building 60 by 40, three stories high, with basement, cellar, etc., fully equipped with all new requirements and new machinery.

The product of our garden amounted to about $75.00. Every inch of land around was turned to use.

St. Joseph's Home, Ottawa.

We paid special attention to increasing the produce of our ground as much as possible. We have no farm, only a garden in which we gathered 400 bags of potatoes and a good quantity of other vegetables, cabbage, tomatoes, cucumbers, carrots, onions and beans.

St. Peter's Infirmary, Hamilton.

Improvements have been made to our buildings; we also had a real good garden, and we used all the corners for producing something. We have enough potatoes for the year, which is something new for us.

The Thomas Williams Home, St. Thomas.

A plot of new ground, 110 by 110 feet, yielded 20 bushels of potatoes, 6 of carrots, 5 of onions, 6 of tomatoes, and more than 150 heads of cabbage.

The carrots and cabbage were pitted, and recently when the pit was opened, to get another supply, they were found to be crisp and keeping beautifully.

In addition to the above, quantities of vegetables were grown on the Home garden as usual.

Victor Home for Young Women, Toronto.

Our two residences on Jarvis Street have become too small for our work, so an annex has been opened at 97 Homewood Avenue. Our girls (under supervision) do the work of all these houses. This work, with that of the sewing room, gives us an opportunity to teach them how to become practical housewives or workers, and keeps all of them busy and happy.

Some small vegetables were grown this summer.

The mothers and babes enjoy the shade of the trees and cool in mid-summer. Our flowers were very good.

A camp for fruit-pickers was carried on under the charge of the Superintendent for seven weeks at Clarkson; about one hundred and ten girls assisted us during this time. One of the girls was cook, and three others of the Home did the general work. Nine fruit-growers in all were benefited by our work; while all our workers were the better for the fresh air and the change in occupation, and they returned to their duties in the city with fresh vigor. We have good plans for the future of the Home.

Working Boys' Home, Toronto.

This year has been one of progress, thirty boys being in residence at the end, against fourteen of the previous year. We have had remarkable success with some boys sent to us by the Juvenile Court; they have settled down to steady work and are learning trades.

We have been able to use the lantern slides to great advantage. The boys do not spend so much time on the street, or in the shows, on account of these attractions in the Home.

County Houses of Refuge.

The Annual Reports from the County Houses of Refuge for the past year are, in most cases, satisfactory, and in some cases particularly creditable. The crops have been, on the whole, excellent.

Many of the Superintendents carry on the work of the farm with great success, and take as much pride in the result as they possibly could if the farms were their own property.

House of Industry, Welland.

Many improvements have been made. These include a new silo ($350.00); a fence around the orchard and garden; cement sidewalks; the underdraining of the south half of the farm at a cost of $490.00; the removal of outside toilets; a

new sink; a fire escape ($75.00); a new hot air furnace in the hospital building which cost $140.00, and there has been opened and equipped a hospital ward for the women.

This year we have produced 1,500 bushels more of such roots as turnips, carrots, beets, mangolds, etc., than last, on the same land; and the yield of potatoes has been more by 100 bushels, and the crop of oats more by 200 bushels; the wheat was also a good crop—though perhaps not more than last year—about 267 bushels. The corn crop was extraordinary for the season, and filled the new silo to its utmost capacity. This extra production is partly due to the underdraining of the land, the use of good manure, and to the planting of as many as three crops in succession on one piece of ground.

We have raised and sold hogs to the value of $200 more than last year.

Wentworth County House of Refuge.

This year we have the best crop since the House was started. We have no apples: but we have grown enough potatoes, cabbage, turnips, carrots, beets and other vegetables during the season to supply the House.

We erected a silo this year, and now have two, each 12 by 34 feet, and have 120 tons of corn ensilage in them. We threshed 1,200 bushels of oats, and 256 of wheat—the most we ever had. We have 40 tons of hay.

We have a fine herd of dairy cows, 22 milch cows, and 10 young cattle; and we have plenty of fodder for them for a year. We sell over 30 gallons of milk per day besides keeping the house supplied. We have six fine horses: and also seven hogs, fattening.

We have kept a satisfactory appearance of things in and around the house.

Up till now (November) we have not burned a bit of coal, having cut and used old fallen wood, dead trees, and such that we could obtain from the woods and pasture land, to keep the furnace going; and the House has been kept warm. In our bins we have a carload of coal, which we are trying to conserve.

House of Refuge, Brantford.

Improvements have been made in the buildings and the farm, which consist of 42 acres and has produced altogether 450 bushels of barley, rye and mixed grain; 417 bushels of potatoes, carrots, beets and beans; 20 bags of onions and 150 heads of cabbage.

The silo is filled with corn; vegetables and fruits have been grown for use.

We have 9 hogs weighing now 150 pounds each; and we have 100 chickens.

Hastings County House of Refuge.

The house and all the buildings have been painted—a great improvement; and this year's crop exceeds that of last year by about two hundred bushels of grain.

The House of Refuge, Stratford.

The grain crops were good, and the roots and garden produce about double that of last season.

County of Oxford House of Refuge, Woodstock.

We had a very good crop of grain; our silo is full of corn. We have turnips, mangolds, carrots and beets, and one hundred and twenty-five bags of potatoes, all very good.

We have seven new milch cows and will have more by the New Year, so we will have plenty of fresh milk and butter.

Some improvements have been made in the buildings and equipment.

County House of Refuge, Whitby.

The superintendent of the house at Whitby reports that the crops this year have been very satisfactory; the cellars are full to overflowing, both in fruit and vegetables; the corn and grain crops are good, and there is a silo full to the top; the field roots are splendid, giving plenty of the very best of feed for all their stock; and on the whole the workers feel that their efforts have been rewarded, and the old people are secure with plenty for the winter. The House has a good supply of coal, too, owing to the timely and wise act of the County Council.

The House of Refuge L'Orignal.

No event of importance has occurred but that the production of garden and farm increased from $719.05 in 1916 to $1,992.07 in 1917.

The Haldimand County House of Refuge, Dunnville.

Total value of field and garden produce and products, $1,748.94.

Field, $902.50: Seventeen loads of hay, eight hundred and thirty-six bushels of potatoes, turnips, onions, carrots, beets, beans, oats, wheat, and corn.

Garden, $209.50: Rhubarb, citrons, cucumbers, tomatoes, radishes, etc., and two bushels of peas; six hundred heads of cabbage, three bushels of plums, ninety quarts of currants, twenty-two baskets of cherries, and thirty-seven crates of berries. From hogs, $183.72; from cattle, $336.25; and from poultry, $116.97.

The Kent County House of Refuge, Chatham.

Reports a splendid crop in everything but potatoes.

The County House of Refuge, Perth.

This House reports an increase both in farm and garden produce, and a good deal of success in the poultry department.

The County House of Refuge, St. Catharines.

The Board of Management of the Lincoln County House of Refuge presents to the County Council an excellent report.

Among other interesting items are the following: Value of fruit sold (grapes, pears, peaches, cherries, etc.) $1,657.67; value of fruit, vegetables and dairy products canned, prepared and stored for use in the House (1918), $1,408.82. The above item includes two hundred and forty-six dozen eggs, and a thousand and thirty-one quarts of canned fruit and tomatoes.

The House of Refuge, Simcoe.

There have been numerous improvements on the farm, such as a new fence, poultry house, ice house, hog-pen, implement house and also a silo.

A gasoline engine has been installed for pumping water for the building.

In the House there is a new floor in the kitchen and cement steps in place of wooden ones at the back entrance.

The crop of turnips was excellent, amounting to a thousand bushels. The other crops were fair; and eight hundred and fifty pounds of pork was produced, also ensilage, valued at $250.00.

House of Industry, Perth.

Our farm production is as follows: 65 tons hay, 15 tons straw, 130 bushels oats, 60 bushels wheat, 400 bushels potatoes, 60 tons ensilage.

This is an advance of from 50 to 100 per cent. over 1916. Our poultry and dairy work has also been satisfactory and some improvements have been made in the house.

Kingston Orphans' Home.

We have had very good success in our garden work for the first time, raising eighty-four bushels of potatoes, beans, tomatoes, beets and onions.

We have gone in for raising fowl, which is a benefit to the Home.

Protestant Orphans' Home, London.

We have a garden which was entered for competition at the Western Fair, and we received first prize. Many of our vegetables and flowers also received prizes. We have a year's stock of vegetables, but no potatoes.

Protestant Orphans' Home, Toronto.

The boys' garden was a great success. We grew cabbage, tomatoes, beans, carrots, parsnips, onions, Swiss chard, and Brussel sprouts.

We won the second prize for savoys at the Horticultural Show.

The Protestant Orphans' Home, Ottawa.

Our 53rd Annual Report shows that we have eight Indian children placed with us by the Indian Department, all happy and contented, the boys showing a special aptitude for manual training. We also have a number of soldiers' children. A few weeks ago a returned soldier, formerly one of our boys, visited the home, so we feel that we also are doing our bit.

The Norway Bay cottage is proving a boon to the children who return to the city with renewed health and vigor.

The Protestant Orphans' Home, St. Catharines.

To our disappointment, it was found that our ground was "filled in," and could not be used for a garden. We were hoping we might have our own garden and so help along as many another one is doing.

Our Home has reason to be proud of its Honor Roll. Fourteen of our boys have proved to be good soldiers.

The C.A.S. removed their wards to their new home on August 14th, 1917.

Sacred Heart Orphanage, Toronto.

This year our production of garden and farm was as follows: 120 bags of potatoes, 1,000 cabbages, 450 heads of celery, 100 bushels of tomatoes, 75 bushels of onions, 25 bags of corn, besides vegetables used during the season.

St. Agatha Orphanage.

Extra products were raised as follows: On our lawn, eight bushels of potatoes; in the flower garden, two bushels each of dry and butter beans, and one and one-half bushels of pickles; from the orchard, one ton of millet hay, and a load of fodder corn.

Sixty-seven thousand seven hundred and forty square feet of additional ground was under cultivation this year.

St. Joseph's Orphanage, Fort William.

We planted every inch of ground on our own premises and had a good crop of all kinds of vegetables, which the children enjoyed very much. We also obtained from property owners the use of four large lots in which we planted potatoes, turnips, carrots, beets and parsnips. We got 165 bags potatoes, 6 bags turnips, 5 bags beets, 4 bags carrots.

We hope for better results next year.

St. Mary's of the Lake, Kingston.

We had over two acres of land under cultivation which yielded about 171 bushels of potatoes, peas, carrots, beans, parsnips, tomatoes, turnips and corn, besides squash, celery and pumpkins, etc.

A new boiler, new floors and other repairs and improvements were made.

The Brantford General Hospital, Brantford.

With the co-operation of the city an entrance has been opened from Elizabeth Street, giving an attractive and convenient hospital entrance and a fine entrance to our Nurses' Residence.

A cement vault for coal has been built, capacity 300 tons.

We regret we have no farm or garden produce to report. We have, however, seventy chickens.

Charlotte Eleanor Englehart Hospital, Petrolia.

We have had our hospital newly wired throughout, and have also plans in readiness for a new maternity wing, which we hope will be started in the early spring.

We have grown all our summer vegetables, and also the greater part of those we will require for our use this winter.

Alexandra Hospital, Ingersoll.

We had a good supply of vegetables from the garden; an additional half acre of ground was planted, from which we obtained almost sufficient potatoes for the winter.

A sterilizer has been installed in the operating room and an X-Ray machine, costing $1,500.00, in the new wing.

Amasa Wood Hospital, St. Thomas.

We have reconstructed a small building in the grounds, thus providing small wards for special cases.

The ventilation of the bath-rooms in the hospital has been much improved.

From our garden we had quite a good supply of fresh vegetables.

The Orillia General Hospital, Ontario.

We have opened a maternity department of six beds, and it has proved a success in every way.

We also added two sun-parlors to the hospital, and during the epidemic of typhoid, in May and June, we were able to accommodate nearly all those who wanted hospital treatment.

In September the Hospital Board canvassed the town and raised $60,000.00 to build a new hospital, to be known as "The Soldiers' Memorial Hospital."

Our garden was also a success; it produced for us all the vegetables used so far, besides enough more to last till the New Year.

Providence Hospital, Haileybury.

Since last October over four hundred patients have undergone operations here.

We have provided two surgical dressing rooms and have improved our heating system.

Our garden was fairly good considering the lateness of the season.

Kincardine General Hospital.

Repairs, new porches, new sewerage and a new road have been made during the year.

In 1916 the garden was a failure because cattle broke in and ate everything. This year fences were repaired and the garden was a great success. We raised nearly 50 bushels of potatoes, onions and beans; 82 quarts of tomatoes, onions and cucumbers; beets and dill for pickles, besides 44 quarts of ripe tomatoes for canning; a wagon load of parsnips, cucumbers and carrots; 70 heads of cabbage; 45 pumpkins, 13 squash, 25 quarts of cherries, and over a barrel of apples. We also reared 22 chickens and one calf.

Two loads of hay were cut off the side of the hill.

Ottawa Maternity Hospital.

Our last year's work has been very successful. We did not lose one patient.

Hotel Dieu Hospital, Kingston, Ont.

In the laundry we installed a complete motor-driven equipment which is giving perfect satisfaction; the linen is done perfectly and with much less labour.

We also endeavoured to cultivate every available spot of ground in our block, and are delighted with the results. Our supply of home grown vegetables has been doubled. They will be a great boon to us this winter.

Hotel Dieu Hospital, Windsor.

A new Nurses' Residence has been erected, and is now nearing completion, at a cost of about $35,000.00.

The Woodstock Hospital.

We have kept the building in good repair, renovating and painting from time to time.

The last mortgage, amounting to $1,100.00, was entirely paid off the House for Nurses on November 7th, 1917. It is now free of debt.

The garden has been a great help in providing fresh vegetables for the patients and the staff; we are hoping to have enough to last us till spring.

Victoria Hospital, Renfrew.

This has been our best and busiest year. In July graduating exercises were held in the Opera House, to which the public was invited, and they proved to be both interesting and successful; six young ladies received their diplomas and hospital pins, and addresses were given by the Hon. W. D. McPherson and the Hon. T. W. McGarry.

A night supervisor has been added to the staff.

Our vegetable produce from the garden was double the amount obtained any other year. We planted about one-tenth of an acre more than last year, and altogether it yielded sufficient vegetables for our use during the summer, and we value our surplus supply in the cellar at $150.00.

Welland County General Hospital.

We have had a new X-Ray machine installed, which was presented to us by the Union Carbide Company of Canada.

An elevator has also been installed.

We have a garden of about half an acre, to which the nurses have attended. This was waste land formerly. All the garden was planted with vegetables which we have found very useful.

St. Michael's Hospital, Toronto.

The X-Ray department has been improved by the addition of a fluoroscopic equipment with upright and horizontal tables.

Last summer some garden space was cultivated and produced a quantity of vegetables.

St. Vincent De Paul Hospital, Brockville.

This institution was fortunate in having a little garden loaned to them by a kind farmer. We were successful in raising excellent vegetables for the use of the hospital.

St. Joseph's Hospital, Peterborough.

We purchased a lot last year adjoining the hospital grounds. It has been cultivated for garden produce, thus diminishing considerably our expenditure.

Improvements have been made in the building.

St. Joseph's Hospital, Chatham.

We have had a new electric elevator installed.

The garden yielded very plentifully this year, especially corn, potatoes and tomatoes; all the space we could possibly spare was utilized, with the result that the crop of vegetables was splendid.

St. Joseph's Hospital, Sudbury.

Owing partly to a late season produce and returns in connection with the garden and farm have not been at all satisfactory. We had about 53 bags of parsnips, onions, beets and carrots, and probably 400 heads of cabbage.

St. John's Hospital, Toronto.

The cultivation of a portion of our land yielded us a goodly supply of tomatoes, lettuce and other greens.

We have been able to arrange with the Toronto General Hospital, and the Hospital for Sick Children, for a six months' course in affiliation with our Training School for Nurses.

St. Joseph's Hospital, Kenora.

The produce of our garden and animals this year amounts to $797.40.

St. Joseph's General Hospital, Port Arthur.

We had a very good kitchen garden this year; the yield from it was very satisfactory. We have, also, a good supply of potatoes from the farm.

The Strathroy Hospital, Ontario.

Our ground consists of two acres and perhaps an acre in lawns, flower gardens, etc.

We have grown enough potatoes to provide us for the season, besides 25 bushels we sold. The yield in parsnips, turnips, carrots and beets amounted to 67 bushels, added to another 75 of sugar beets (which will afford food for the cow), also squash, pumpkins, and cabbage.

St. Francis General Hospital, Smith's Falls, Ont.

We cultivated part of our ground here and the yield was between 45 and 50 bushels of potatoes, 4 bushels of carrots, 2½ bushels of parsnips, 100 heads of lettuce, beets, onions, cabbage, and a considerable quantity of string beans.

The Ross Memorial Hospital, Lindsay.

An X-Ray Department has been established at a cost of over $3,000.00; all the equipment being presented by Mr. J. K. L. Ross.

Royal Alexandra Hospital, Fergus.

We raised a quantity of vegetables—cabbage, beets, carrots, turnips, and about 50 bushels of potatoes, all for the sustenance of the Hospital.

Royal Jubilee Hospital, Kenora.

A small kitchen garden supplied us with a fair amount of vegetables during the summer. There is no farm land in connection with the place. We have 30 hens.

The Hospital for Sick Children, Toronto.

"To-day hundreds of Canadians are in the trenches, fighting in their manhood to bring death to tyranny, because the Hospital for Sick Children fought to bring life to these same Canadians in their childhood."

This Hospital, which has just completed 42 years of service, has treated since 1875, 32,893 in-patients, and 311,025 out-patients, an average of 8,189 per year.

Of the in-patients, 24,944 were from Toronto, and 7,949 from other parts of the Province; over 47 per cent. were cured, and over 29 per cent. improved.

Last year the total number of in-patients admitted was 3,740, an increase of 695 over 1916. Girls, 1,545; boys, 2,195.

The Baby ward admitted 1,162 babies, one day old and upward. This ward had already saved many lives and is a great boon to the community.

The X-Ray Department, the Accident Department, where no less than 730 children were received and cared for, the Orthopedic Department where splendid work is done, and the Nurses' Training School, should all be specially mentioned here if the limits of space would allow.

Guelph General Hospital, Guelph.

The laundry has been enlarged, at a cost of $1.000.00, and an additional equipment installed at a cost of about $2,000.00.

A few minor changes have been made in the main building to simplify the work; chief among these has been the arrangement of a central linen-room, and nurses' diet kitchen.

In the housekeeping department a new course of three months has been established for Domestic Science graduates in Hospital Dietetics. Two graduates have completed the course.

This Hospital has its own dairy: and all available land space was utilized for farm and garden produce.

General and Marine Hospital, Owen Sound.

Painting, decorating and improved heating have made a wonderful improvement; and a new operating-table was given us by a society composed of the wives of the medical men.

Our garden was very productive, though a severe hailstorm in July destroyed part of it.

Grace Hospital, Toronto.

Our accommodation has been increased and the light and ventilation in part of the building has been improved.

A fully qualified dispenser has been appointed; and a graduate nurse is now in charge of the Out-patient Department.

The General Hospital, Stratford.

We engaged a second man, ploughed up and planted all available land, and so had a goodly supply of fresh vegetables during the summer, and also a considerable quantity of potatoes and other vegetables to help us through the winter.

We built a poultry house, 20 by 30 feet, with suitable runs attached; put in some hundred hens, and have had fresh eggs and poultry whenever wanted. The scraps from the hospital reduce the feed bill considerably.

Through the liberality of our Chairman, we had installed one sterilizer for Hospital utensils, and another for our china dinner dishes, etc.

We have, this year, added a graduate dietitian, who has charge of the culinary department, and the training of the nurses in dietetics.

General repairs have been made, additional electric heating apparatus purchased, and heavy wiring put in, so that the portable heaters can be used in the wards where specially needed.

Arrangements have been made to put in fire-doors between the old and new wings; and large castors with 4-inch wheels will be put on nearly all the beds, so that in case of danger they can be wheeled from one wing to another, and the fire-doors closed.

Each nurse on graduating is presented with a bonus of $25.00.

General Hospital, Sault Ste. Marie.

We installed a large boiler to replace the three furnaces and hope to effect a saving in coal.

Six sun-rooms, about 35 by 15 feet, were erected.

The garden produced 130 bags of vegetables such as potatoes, parsnips, carrots, beets and turnips; over 1,000 heads of cauliflower, celery and cabbage, besides 30 dozen heads of lettuce, also parsley and sage; 82 baskets of tomatoes, beans and peas from which we obtained, including those we canned, 226 quarts of pickles; 6 bushels of onions, besides another hundred bunches of green onions; 300 bunches of rhubarb, and 112 quarts of fruit such as strawberries, gooseberries and currants.

Our poultry department produced over 807 dozens of eggs; and our chicken reckoned in pounds (lbs.) amounted to 116 pounds.

The General Hospital, Port Hope.

For the past four years we have had a garden, but always had to buy some of our summer vegetables and all of our winter ones. This year we will not have to buy anything, other than potatoes.

Our new building was opened in July, 1916, but last winter and spring we had not enough room for patients. Plans for a new wing are being prepared.

We have also established a Training School, and have six pupil nurses. We have made it a three-year course: and our endeavour is to give the pupils the very best we can.

The building formerly used as a hospital has been re-decorated and comfortably furnished by the Women's Hospital Mission, as a nurses' residence.

An electric washer and mangle have been installed in the laundry.

General Hospital, Oshawa.

Our new building is progressing slowly, but the ladies of the Board are busy preparing to open the new maternity department in the building, valued at $20,000.00, presented to the Hospital Board by the McLaughlin Motor Company.

The year we have just closed was a very satisfactory one: we were pleased to carry over a small surplus.

Our garden of one and a quarter acres, has produced the following ample supply to help us through the winter and lighten our expenses: 118 bags of potatoes; 10 gallons radishes; 102 pounds of spinach; 650 ears of corn; over 900 heads of cabbage and celery; 56 bushels of onions, peas, cucumbers, beans, tomatoes, turnips, carrots, parsnips and beets; 14 pumpkins; 20 squash; 6 citrons; and of fruits consisting of gooseberries, raspberries and currants, 75 quarts.

General Hospital, Mattawa.

The increased production of food has been wonderful. We have stored provisions for the year including potatoes and vegetables of all kinds.

Our poultry house is in good condition with more than 100 fowls. We do not expect to buy an egg during the winter months.

The grain crop has been plentiful. Arrangements have been made to feed the cattle therefrom; and any surplus grain will be exchanged for other necessities we may want.

General Hospital, Pembroke.

We have opened a Maternity Department which, though small, has met the demand up to the present. This new departure is very pleasing to the doctors, and is also a great advantage to the training school.

General Hospital, Bowmanville.

We have added a new wing costing about $8,000.00. This gives us a nursery, sterilizing room, doctor's wash room, maternity operating room, and additional private rooms.

We have added laundry equipment.

We employed a gardener during the past summer, and so have had our own supply of a variety of vegetables since August; we have sufficient for a few months longer.

General Hospital, Kingston.

Only the essential repairs and improvements were made. We have a small surplus. The question of extensive alterations and new buildings is under consideration.

The small garden plot yielded well: a very active interest was taken in it by members of the Board. Altogether we obtained nearly 100 bushels of potatoes, beans, onions, beets, carrots and tomatoes; 150 heads of cabbage, and enough lettuce and radishes for two months' use.

Cobourg Hospital.

The improvements during the year included a new elevator, hospital window screens, and new refrigerators.

The garden could not have been much better—not only supplying fresh flowers and vegetables all summer, but filling the root cellar with enough celery, cabbage, beets and turnips, etc., to last all winter.

General and Marine Hospital, Collingwood.

We have had a busy year at the Hospital.

A cement floor has been provided in the basement.

We were put to considerable expense cultivating a kitchen garden, owing to the fact that the Hospital is built on a gravel hill; but the labour has been worth while for the produce has supplied the Institution with vegetables and more than compensated for the initial expense.

TABLE I.—Showing the general movements in each hospital separately.

Hospitals.	Location.	Capacity in beds.	Number remaining under treatment on 1st Oct., 1916.	Number admitted during the year ending 30th Sept., 1917.	Number of births in hospital during the year.	Total number under treatment during the year ending 30th Sept., 1917.	Number discharged during the year.	Number who died during the year.	Number remaining under treatment on 30th Sept., 1917.
Victoria Hospital	Almonte	14	8	136	25	169	154	10	5
Royal Victoria Hospital	Barrie	75	39	504	66	609	565	25	19
General Hospital	Belleville	100	24	958	78	1,060	983	47	30
General Hospital	Bowmanville	25	10	231	36	277	243	20	14
General Hospital	Brantford	115	89	1,794	120	2,003	1,806	102	95
Brant Sanitarium	"	27	14	50	.....	64	24	19	21
General Hospital	Brockville	70	42	811	72	925	844	45	36
St. Vincent de Paul Hospital	"	95	48	1,083	76	1,207	1,113	47	47
Lady Minto Hospital	Chapleau	20	4	124	14	142	128	5	9
General Hospital	Chatham	85	31	745	78	854	763	49	42
St. Joseph's Hospital	"	70	42	627	91	760	668	53	39
Cottage Hospital	Cobourg	34	10	236	17	263	232	17	14
Lady Minto Hospital	Cochrane	25	15	196	17	228	199	12	17
General and Marine Hospital	Collingwood	60	36	521	45	602	524	45	33
General Hospital	Cornwall	60	43	647	46	736	680	31	25
Hotel Dieu Hospital	"	105	41	943	42	1,026	942	46	38
Royal Alexandra Hospital	Fergus	30	16	265	15	296	247	25	24
McKellar General Hospital	Fort William	150	65	1,856	188	2,109	1,945	100	64
General Hospital	Galt	60	37	742	101	880	769	65	46
General and Marine Hospital	Goderich	16	2	152	36	190	175	13	2
Muskoka Cottage Sanitarium	Gravenhurst	78	48	175	.....	223	154	8	61
Muskoka Free Hosp. for Con.	"	290	240	370	.....	610	306	45	259
General Hospital	Guelph	100	71	1,231	84	1,386	1,286	47	53
St. Joseph's Hospital	"	68	34	712	49	795	722	28	45
City Hospital	Hamilton	384	310	6,496	385	7,191	6,525	414	252
St. Joseph's Hospital	"	123	65	1,888	187	2,140	1,965	92	83
Mountain Sanitarium	"	168	102	215	.....	317	132	21	164
Providence Hospital	Haileybury	84	43	747	16	806	743	30	33
General Hospital	Ingersoll	30	13	148	39	200	168	17	15
General Hospital	Kenora	35	14	215	26	255	223	15	17
St. Joseph's Hospital	"	60	16	137	7	160	135	12	13
General Hospital	Kincardine	17	4	110	18	132	119	8	5
General Hospital	Kingston	214	89	2,918	129	3,136	2,906	101	129
Hotel Dieu Hospital	"	160	91	1,710	95	1,896	1,743	70	83
Essex Health Association	Kingsville	50	19	44	.....	63	38	4	21
Kitchener and Waterloo Hosp.	Kitchener	70	35	968	91	1,094	996	59	39
General Hospital	London	350	208	3,255	264	3,727	3,322	223	182
St. Joseph's Hospital	"	153	91	1,533	133	1,757	1,592	75	90
Queen Alexandra Sanitarium	"	119	75	153	.....	228	124	.....	104
Ross Memorial Hospital	Lindsay	35	19	523	26	568	521	31	16
General Hospital	Mattawa	50	24	234	.....	258	224	10	24
General Hospital	Midland	20	9	265	31	305	278	19	8
Lady Minto Hospital	New Liskeard	25	8	141	13	162	140	14	8
General Hospital	Niagara Falls	25	27	441	54	522	473	22	27
Queen Victoria Hospital	North Bay	40	11	350	57	418	387	20	11
General Hospital	Orangeville	16	6	123	14	143	129	5	9
General Hospital	Orillia	33	12	547	51	610	569	24	17
General Hospital	Oshawa	30	30	455	38	523	462	39	22
General Protestant Hospital	Ottawa	160	117	2,683	.....	2,800	2,558	122	120
Roman Catholic Hospital	"	300	144	2,977	4	3,125	2,876	125	124
Maternity Hospital	"	20	34	560	535	1,129	1,077	14	38
Misericordia Maternity Hosp.	"	195	125	293	161	579	350	95	134
St. Luke's General Hospital	"	150	98	2,043	2	2,143	1,978	75	90
Royal Sanatorium	"	68	61	133	.....	194	96	51	47
General and Marine Hospital	Owen Sound	60	23	467	61	551	502	18	31
General Hospital	Parry Sound	40	11	264	21	296	269	13	14
St. Joseph's Hospital	"	34	18	305	37	360	324	23	13
General Hospital	Pembroke	95	43	860	.....	903	812	50	41
The Cottage Hospital	"	35	14	252	20	286	269	10	7
General Hospital	Penetanguishene	18	5	142	29	176	162	9	5
Nicholls' Hospital	Peterborough	80	38	1,085	90	1,213	1,101	72	40
St. Joseph's Hospital	"	54	37	631	24	692	636	38	18
C. E. Englehart Hospital	Petrolea	20	9	188	6	203	179	15	9
Railway, Marine & Gen. Hosp.	Port Arthur	54	31	658	40	729	688	25	16
St. Joseph's Hospital	"	200	33	980	90	1,103	1,036	38	29
General Hospital	Port Hope	25	6	264	32	302	271	17	14
Victoria General Hospital	Renfrew	30	22	494	38	554	503	23	28
General and Marine Hospital	St. Catharines	80	49	1,082	220	1,351	1,248	64	39
Consumptive Sanitarium	"	20	13	33	.....	46	24	10	12
Amasa Wood Hospital	St. Thomas	64	33	798	117	948	863	48	37
General Hospital	Sarnia	53	27	580	88	695	624	36	35
General Hospital	SaultSte.Mar.	135	38	908	38	984	900	54	30
Public Hospital	Smith's Falls	65	38	406	28	472	418	33	21
St. Francis' Hospital	"	40	28	454	29	511	473	13	25
General Hospital	Stratford	65	21	517	71	609	550	29	30
General Hospital	Strathroy	25	15	136	4	155	131	17	7
St. Joseph's Hospital	Sudbury	160	79	1,321	71	1,471	1,304	75	92
General Hospital	Toronto	700	471	10,160	901	11,532	10,345	642	545
Grace Hospital	"	128	104	2,151	339	2,594	2,359	110	125
Hospital for Sick Children	"	250	208	3,532	.....	3,740	3,178	379	183

TABLE I.—Showing the general movements in each hospital separately.—Concluded.

Hospitals.	Location.	Capacity in beds.	Number remaining under treatment on 1st Oct., 1916.	Number admitted during the year ending 30th Sept., 1917.	Number of births in hospital during the year.	Total number under treatment during the year ending 30th Sept., 1917.	Number discharged during the year.	Number who died during the year.	Number remaining under treatment on 30th Sept., 1917.
Orthopedic Hospital	Toronto	35	14	318	.....	332	306	2	24
The Preventorium	"	60	38	89	.....	127	81	.....	46
St. John's Hospital	"	28	12	264	.....	276	243	14	19
St. Michael's Hospital	"	350	235	4,553	357	5,145	4,583	313	249
Wellesley Hospital	"	75	57	1,738	148	1,943	1,844	42	57
Western Hospital	"	253	161	3,872	514	4,547	4,098	283	166
Women's College Hospital	"	26	20	400	21	441	403	8	30
General Hospital	Walkerton	35	11	214	16	241	217	15	9
General Hospital	Welland	50	30	983	31	1,044	962	55	27
Toronto Free Hosp. for Con.	Weston	390	299	467	.....	766	253	196	317
King Edward Sanatorium	"								
Queen Mary Hosp. for Children.	"								
Hotel Dieu Hospital	Windsor	125	57	1,420	159	1,636	1,481	109	46
General Hospital	Wingham	25	5	130	12	147	134	7	6
General Hospital	Woodstock	50	25	483	41	549	488	35	26
Totals for 1917		.....	5,287	91,013	7,365	103,665	92,583	5,651	5,431
Totals for 1916		.....	5,205	89,386	6,631	101,222	90,367	5,541	5,314

TABLE II.—Showing the collective stay in days of the adult and infant patients, also the average length of time each patient was under treatment.

Hospitals.	Location.	No. of patients, including infants born.	Collective stay of infants under one year of age.	Collective stay of adult patients.	Total collective stay of adults and infants.	Average stay of each patient, including infants.
Victoria Hospital	Almonte	169	336	1,952	2,288	13.5
Royal Victoria Hospital	Barrie	609	889	20,033	20,922	34.4
General Hospital	Belleville	1,060	967	13,422	14,389	13.6
General Hospital	Bowmanville	277	461	3,865	4,326	12.0
General Hospital	Brantford	2,003	1,750	26,165	27,915	13.9
Brant Sanatorium	"	64	.....	7,036	7,036	109.9
General Hospital	Brockville	925	1,072	15,518	16,590	17.9
St. Vincent de Paul Hospital	"	1,207	1,073	18,595	19,668	16.3
Lady Minto Hospital	Chapleau	142	132	1,906	2,038	14.4
General Hospital	Chatham	854	1,112	14,744	15,856	18.6
St. Joseph's Hospital	"	760	1,132	10,862	11,994	15.8
Cottage Hospital	Cobourg	263	321	3,640	3,961	15.0
Lady Minto Hospital	Cochrane	228	15	2,829	2,844	12.5
General and Marine Hospital	Collingwood	602	891	12,844	13,735	22.8
General Hospital	Cornwall	736	729	11,419	12,148	16.5
Hotel Dieu Hospital	"	1,026	566	13,950	14,516	14.1
Royal Alexandra Hospital	Fergus	296	204	5,436	5,640	19.0
McKellar General Hospital	Fort William	2,109	2,875	22,356	25,231	12 0
General Hospital	Galt	880	1,768	11,826	15,594	15.4
General and Marine Hospital	Goderich	190	413	2,233	2,646	14.0
Muskoka Cottage Sanatorium	Gravenhurst	223	.....	20,308	20,308	91.0
Muskoka Free Hospital for Consump.	"	610	.....	83,048	83,048	136.1
General Hospital	Guelph	1,386	1,288	22,656	23,944	17.3
St. Joseph's Hospital	"	795	753	12,497	13,250	20.3
City Hospital	Hamilton	7,191	8,068	105,174	113,242	15.7
St. Joseph's Hospital	"	2,140	2,415	27,718	30,133	14.1
Mountain Sanatorium	"	317	.....	45,098	45,098	142.3
Providence Hospital	Haileybury	806	213	12,876	13,089	16.2
General Hospital	Ingersoll	290	469	2,751	3,220	16.1
General Hospital	Kenora	255	356	3,659	4,015	15.7
St. Joseph's Hospital	"	160	239	7,898	8,137	50.8
General Hospital	Kincardine	132	208	1,620	1,828	13.8
General Hospital	Kingston	3,136	813	44,902	45,715	14.6
Hotel Dieu Hospital	"	1,896	1,772	31,074	32,846	17.3
Essex Health Association	Kingsville	63	.....	7,310	7,310	116.0
Kitchener and Waterloo Hospital	Kitchener	1,094	1,419	14,272	15,691	14.3
General Hospital	London	3,727	4,383	66,131	70,514	18.9
St. Joseph's Hospital	"	1,757	2,189	26,788	28,977	16.5
Queen Alexandra Sanatorium	"	228	.....	20,202	20,202	88.1
Ross Memorial Hospital	Lindsay	568	370	7,303	7,673	13.6
General Hospital	Mattawa	258	.....	9,458	9,458	36.5
General Hospital	Midland	305	425	4,583	5,008	16.4
Lady Minto Hospital	New Liskeard	162	168	3,260	3,428	21.1
General Hospital	Niagara Falls	522	633	7,707	8,340	16.0
Queen Victoria Hospital	North Bay	418	751	4,430	5,181	12.4
General Hospital	Orangeville	143	560	1,913	2,473	17.3
General Hospital	Orillia	610	22	8,448	8,470	13.7
General Hospital	Oshawa	523	656	6,072	6,728	12.9
General Protestant Hospital	Ottawa	2,800	807	42,439	43,246	15.4
Roman Catholic Hospital	"	3,125	1,251	55,088	56,339	19.0
Maternity Hospital	"	1,129	6,557	6,886	13,443	11.9
Misericordia Maternity Hospital	"	579	21,602	22,211	43,813	75.7
St. Luke's General Hospital	"	2,143	740	33,863	34,603	16.1
Royal Sanatorium	"	194	.....	21,871	21,871	112.7
General and Marine Hospital	Owen Sound	551	934	7,065	7,999	14.5
General Hospital	Parry Sound	296	209	3,800	4,009	13.5
St. Joseph's Hospital	"	361	479	4,609	5,088	14.1
General Hospital	Pembroke	903	.....	16,664	16,664	18.5
The Cottage Hospital	"	283	306	3,895	4,201	14.7
General Hospital	Penetanguishene	176	143	1,059	1,202	6.8
Nicholls' Hospital	Peterborough	1,213	1,037	14,304	15,341	12.6
St. Joseph's Hospital	"	692	368	10,550	10,918	15.8
C. E. Englehart Hospital	Petrolea	203	122	3,418	3,540	17.4
Railway, Marine and General Hosp.	Port Arthur	729	741	10,476	11,217	15.4
St. Joseph's Hospital	"	1,103	315	15,500	15,815	14.3
General Hospital	Port Hope	302	526	4,407	4,933	16.3
Victoria General Hospital	Renfrew	554	518	7,383	7,901	14.3
General and Marine Hospital	St. Catharines	1,351	3,005	17,781	20,786	15.4
Consumptive Sanatorium	"	46	.....	3,728	3,728	81.0
Amasa Wood Hospital	St. Thomas	948	1,260	11,326	12,586	13.3
General Hospital	Sarnia	695	1,203	9,676	10,879	15.7
General Hospital	Sault Ste. Marie	984	.....	17,006	17,006	17.2
Public Hospital	Smith's Falls	472	395	8,457	8,852	18.8
St. Francis' Hospital	"	511	345	7,514	7,859	15.4
General Hospital	Stratford	609	862	9,305	10,167	16.7
General Hospital	Strathroy	155	71	2,975	3,046	19.5
St. Joseph's Hospital	Sudbury	1,471	1,226	23,218	24,444	16.6
General Hospital	Toronto	11,532	1,157	183,232	184,389	16.0
Grace Hospital	"	2,594	374	31,320	31,694	12.2

TABLE II.—Showing the collective stay in days of the adult and infant patients, also the average length of time each patient was under treatment.—Concluded.

Hospitals.	Location.	No. of patients, including infants born.	Collective stay of infants under one year of age.	Collective stay of adult patients.	Total collective stay of adults and infants.	Average stay of each patient, including infants.
Hospital for Sick Children	Toronto	3,740	.....	75,684	75,684	20.2
Orthopedic Hospital	"	332	100	7,743	7,843	23.6
The Preventorium	"	127	.....	15,951	15,951	125.6
St. John's Hospital	"	276	35	5,874	5,909	21.4
St. Michael's Hospital	"	5,145	1,123	92,213	93,336	18.1
Wellesley Hospital	"	1,943	3,104	19,202	22,306	11.5
Western Hospital	"	4,547	192	67,013	67,205	14.8
Women's College Hospital	"	441	3	5,059	5,062	11.3
General Hospital	Walkerton	241	401	3,422	3,823	15.8
General Hospital	Welland	1,044	574	11,333	11,907	11.4
Toronto Free Hosp. for Consumptives	Weston	766	.....	110,381	110,381	144.1
King Edward Sanatorium	"					
Queen Mary Hospital for Children	"					
Hotel Dieu Hospital	Windsor	1,636	1,849	18,669	20,518	12.5
General Hospital	Wingham	147	179	2,070	2,249	15.3
General Hospital	Woodstock	549	616	9,429	10,045	18.3
Totals for 1917		103,665	99,605	1,884,856	1,984,461	19.2
Totals for 1916		101,222	112,058	1,878,436	1,991,094	19.6

TABLE III.—Showing the deductions which have to be made from the collective stay of patients for the protracted residence of incurables, lying-in cases, etc. For persons coming within these classes only seven cents per day is allowed.

Hospitals.	Location.	Collective days' stay, exclusive of infants under one year of age.	Deduct for incurables and lying-in cases for which only Refuge rate is allowed also deduct the days' stay of patients who paid over $7.00 per week.	No. of days' stay for which hospital allowance is made.
Victoria Hospital	Almonte	1,952	591	1,361
Royal Victoria Hospital	Barrie	20,033	3,020	17,013
General Hospital	Belleville	13,422	6,928	6,494
General Hospital	Bowmanville	3,865	197	3,668
General Hospital	Brantford	26,165	10,427	15,738
Brant Sanitarium	"	7,036	.....	7,036
General Hospital	Brockville	15,518	11,635	3,883
St. Vincent de Paul Hospital	"	18,595	7,303	11,292
Lady Minto Hospital	Chapleau	1,906	141	1,765
General Hospital	Chatham	14,744	12,133	2,611
St. Joseph's Hospital	"	10,862	7,859	3,003
Cottage Hospital	Cobourg	3,640	336	3,304
Lady Minto Hospital	Cochrane	2,829	354	2,475
General and Marine Hospital	Collingwood	12,844	7,878	4,966
General Hospital	Cornwall	11,419	6,702	4,717
Hotel Dieu Hospital	"	13,950	4,047	9,903
Royal Alexandra Hospital	Fergus	5,436	3,995	1,441
McKellar General Hospital	Fort William	22,356	12,671	9,685
General Hospital	Galt	11,826	6,245	5,581
General and Marine Hospital	Goderich	2,233	1,300	933
Muskoka Cottage Sanitarium	Gravenhurst	20,308	.....	20,308
Muskoka Free Hosp. for Cons.	"	83,048	.....	83,048
General Hospital	Guelph	22,656	9,855	12,801
St. Joseph's Hospital	"	12,497	4,938	7,559
City Hospital	Hamilton	105,174	36,326	68,848
St. Joseph's Hospital	"	27,718	13,077	14,641
Mountain Sanitarium	"	45,098	.....	45,098
Providence Hospital	Haileybury	12,876	1,698	11,178
General Hospital	Ingersoll	2,751	43	2,708
General Hospital	Kenora	3,659	1,942	1,717
St. Joseph's Hospital	"	7,898	5,854	2,044
General Hospital	Kincardine	1,620	71	1,549
General Hospital	Kingston	44,902	29,588	15,314
Hotel Dieu Hospital	"	31,074	12,048	19,026
Essex Health Association	"	7,310	.....	7,310
Kitchener and Waterloo Hospital	Kingsville	14,272	9,166	5,106
General Hospital	Kitchener	66,131	31,030	35,101
St. Joseph's Hospital	London	26,788	20,794	5,994
Queen Alexandra Sanitarium	"	20,202	.....	20,202
Ross Memorial Hospital	"	7,303	3,688	3,615
General Hospital	Lindsay	9,458	957	8,501
General Hospital	Mattawa	4,583	2,168	2,415
Lady Minto Hospital	Midland	3,260	690	2,570
General Hospital	New Liskeard	7,707	3,214	4,463
Queen Victoria Hospital	Niagara Falls	4,430	2,113	2,317
General Hospital	North Bay	1,913	21	1,892
General Hospital	Orangeville	8,448	1,090	7,358
General Hospital	Orillia	6,072	141	5,931
General Protestant Hospital	Oshawa	42,439	27,532	14,907
Roman Catholic Hospital	Ottawa	55,088	30,730	24,358
Maternity Hospital	"	6,886	4,711	2,175
Misericordia Maternity Hospital	"	22,211	17,115	5,096
St. Luke's General Hospital	"	33,863	24,989	8,874
Royal Sanatorium	"	21,871	.....	21,871
General and Marine Hospital	Owen Sound	7,065	5,114	1,951
General Hospital	Parry Sound	3,800	1,198	2,602
St. Joseph's Hospital	"	4,609	390	4,219
General Hospital	Pembroke	16,664	4,634	12,030
The Cottage Hospital	"	3,895	2,074	1,821
General Hospital	Penetanguishene	1,059	83	976
Nicholls' Hospital	Peterborough	14,304	6,759	7,545
St. Joseph's Hospital	"	10,550	4,145	6,405
C. E. Englehart Hospital	Petrolea	3,418	68	3,350
Railway, Marine and Gen. Hosp.	Port Arthur	10,476	372	10,104
St. Joseph's Hospital	"	15,500	9,135	6,365
General Hospital	Port Hope	4,407	419	3,988
Victoria General Hospital	Renfrew	7,383	3,943	3,440
General and Marine Hospital	St. Catharines	17,781	12,260	5,521
Consumptive Sanatorium	"	3,728	.....	3,728
Amasa Wood Hospital	St. Thomas	11,326	3,587	7,739
General Hospital	Sarnia	9,676	6,308	3,368
General Hospital	Sault Ste. Marie	17,006	9,931	7,075
Public Hospital	Smith's Falls	8,457	2,319	6,138
St. Francis' Hospital	"	7,514	1,821	5,693
General Hospital	Stratford	9,305	4,440	4,865
General Hospital	Strathroy	2,975	573	2,402
St. Joseph's Hospital	Sudbury	23,218	7,238	15,980

TABLE III.—Showing the deductions which have to be made from the collective stay of patients for the protracted residence of incurables, lying-in cases, etc. For persons coming within these classes only seven cents per day is allowed.—Continued.

Hospitals.	Location.	Collective days' stay, exclusive of infants under one year of age.	Deduct for incurables and lying-in cases for which only Refuge rate is allowed, also deduct the days' stay of patients who paid over $7.00 per week.	No. of days' stay for which hospital allowance is made.
General Hospital	Toronto	183,232	82,559	100,673
Grace Hospital	"	31,320	15,757	15,563
Hospital for Sick Children	"	75,684	19,336	56,348
Orthopedic Hospital	"	7,743	6,668	1,075
The Preventorium	"	15,951	.....	15,951
St. John's Hospital	"	5,874	110	5,764
St. Michael's Hospital	"	92,213	28,012	64,201
Wellesley Hospital	"	19,202	19,057	145
Western Hospital	"	67,013	35,973	31,040
Women's College Hospital	"	5,059	80	4,979
General Hospital	Walkerton	3,422	2,225	1,197
General Hospital	Welland	11,333	867	10,466
Toronto Free Hos. for Con.	Weston	110,381	.....	110,381
King Edward Sanatorium	"			
Queen Mary Hosp. for Children	"			
Hotel Dieu Hospital	Windsor	18,669	7,984	10,685
General Hospital	Wingham	2,070	1,188	882
General Hospital	Woodstock	9,429	5,245	4,184
Totals for 1917		1,884,856	711,253	1,173,603
Totals for 1916		1,878,436	598,336	1,280,100

TABLE IV.—Relative to income of Hospitals.

Hospitals.	Location.	Amount received from municipalities as a grant and for patients' maintenance.	Amount received from patients for board.	Amount received as income from property or investments belonging to hospital.	Subscriptions and donations of private individuals and incidental receipts.	Total receipts from all sources other than the Government grant.
		$ c.	$ c.	$ c.	$ c.	$ c.
Victoria Hospital	Almonte	435 00	1,753 32	377 34	1,373 84	3,939 50
Royal Victoria Hospital	Barrie	500 00	11,734 21	456 00	1,896 49	14,586 70
General Hospital	Belleville	1,700 00	20,871 20	209 50	3,537 63	26,318 33
General Hospital	Bowmanville	1,300 00	7,120 97	167 84	636 36	9,225 17
General Hospital	Brantford	19,750 00	32,899 44	41 51	561 09	53,252 04
Brant Sanitarium	"	5,821 48	2,124 93	.....	545 52	8,491 93
General Hospital	Brockville	2,000 00	21,624 42	1,376 33	2,590 02	27,590 77
St. Vincent de Paul Hospital	"	2,385 00	18,987 76	.....	5,989 49	27,362 25
Lady Minto Hospital	Chapleau	.....	3,532 94	.....	2,489 20	6,022 14
General Hospital	Chatham	1,844 90	22,562 29	.....	355 00	24,762 19
St. Joseph's Hospital	"	1,036 25	16,194 25	.....	948 50	18,179 00
Cottage Hospital	Cobourg	1,270 20	5,982 57	.....	1,041 33	8,294 10
Lady Minto Hospital	Cochrane	.....	3,757 53	.....	1,853 66	5,611 19
General and Marine Hosp.	Collingwood	1,400 00	14,248 69	.....	38 42	15,687 11
General Hospital	Cornwall	2,425 00	13,737 40	861 41	3,574 99	20,538 80
Hotel Dieu Hospital	"	2,225 00	8,954 99	.....	5,771 49	16,951 48
Royal Alexandra Hospital	Fergus	1,172 20	12,205 50	.....	404 40	13,782 10
McKellar General Hospital	Fort William	9,400 00	30,131 55	.....	524 25	40,055 80
General Hospital	Galt	4,975 00	16,187 02	488 00	151 00	21,801 02
Gen. and Marine Hospital	Goderich	1,016 88	3,055 45	126 25	740 33	4,938 91
Muskoka Cott. Sanitarium	Gravenhurst	2,950 59	52,121 93	2,205 23	1,213 90	58,491 65
Muskoka Free Hos. for Con.	"	75,821 45	8,532 41	7,234 73	27,617 34	119,205 93
General Hospital	Guelph	4,020 68	33,590 52	.....	2,996 89	40,608 09
St. Joseph's Hospital	"	4,087 60	12,389 45	.....	770 28	17,247 33
City Hospital	Hamilton	91,485 98	87,950 02	.....	.....	179,436 00
St. Joseph's Hospital	"	1,910 65	31,489 79	585 00	1,142 50	35,127 94
Mountain Sanitarium	"	21,062 00	7,598 96	549 73	.....%	29,210 69
Providence Hospital	Haileybury	1,012 70	16,250 50	571 65	3,919 30	21,754 15
General Hospital	Ingersoll	1,500 00	4,624 65	125 00	10,644 17	16,893 82
General Hospital	Kenora	2,000 00	5,276 40	.....	205 00	7,481 40
St. Joseph's Hospital	"	1,094 00	3,068 70	797 40	2,388 44	7,348 54
General Hospital	Kincardine	1,500 00	3,020 04	.....	259 00	4,779 04
General Hospital	Kingston	13,240 00	52,113 34	.....	6,829 57	72,182 91
Hotel Dieu Hospital	"	5,416 85	26,452 73	.....	8,618 63	40,488 21
Essex Health Association	Kingsville	2,645 67	4,652 62	463 25	3,062 68	10,824 22
Kitchener & Waterloo Hosp.	Kitchener	7,300 00	18,751 19	54 90	1,067 73	27,173 82
General Hospital	London	91,002 83	61,894 44	529 45	5,316 83	158,743 55
St. Joseph's Hospital	"	750 00	53,401 15	.....	.....	54,151 15
Queen Alexandra Sanitarium	"	26,828 58	3,766 90	2,569 59	289 33	33,454 40
Ross Memorial Hospital	Lindsay	1,700 00	8,868 37	2,655 88	1,357 43	14,581 68
General Hospital	Mattawa	370 00	3,161 11	.....	1,713 95	5,245 06
General Hospital	Midland	1,025 00	5,974 53	27 72	217 31	7,244 56
Lady Minto Hospital	New Liskeard	200 00	5,798 53	.....	1,221 26	7,219 79
General Hospital	Niagara Falls	1,800 00	12,449 87	.....	2,077 01	16,326 88
Queen Victoria Hospital	North Bay	1,500 00	8,074 88	.....	2,129 89	11,704 77
General Hospital	Orangeville	.....	4,960 20	.....	140 00	5,100 20
General Hospital	Orillia	500 00	9,337 57	.....	69 65	9,907 22
General Hospital	Oshawa	1,200 00	11,164 77	470 57	998 40	13,833 74
General Protestant Hospital	Ottawa	16,135 80	66,793 29	.....	5,421 94	88,351 03
Roman Catholic Hospital	"	21,629 15	51,474 27	1,202 70	4,631 04	78,937 16
Maternity Hospital	"	1,675 00	15,363 81	.....	1,610 57	18,649 38
Misericordia Maternity Hos.	"	2,550 00	2,506 19	.....	11,848 31	16,904 50
St. Luke's General Hospital	"	8,789 00	50,823 95	207 35	3,507 25	63,327 55
Royal Sanatorium	"	24,583 20	2,776 65	.....	.....	27,359 85
General and Marine Hosp.	Owen Sound	3,306 00	12,522 01	100 00	357 95	16,285 96
General Hospital	Parry Sound	.....	6,520 45	.....	797 70	7,318 15
St. Joseph's Hospital	"	257 00	6,237 10	.....	318 75	6,812 85
General Hospital	Pembroke	1,720 00	13,844 85	120 00	602 85	16,287 70
The Cottage Hospital	"	1,220 00	5,384 80	.....	1,924 18	8,528 98
General Hospital	Penetanguishene	800 00	1,568 40	.....	682 03	3,250 43
Nicholls' Hospital	Peterborough	1,282 00	19,469 08	10,230 09	19 05	31,000 22
St. Joseph's Hospital	"	715 00	11,545 32	87 00	589 50	12,936 82
C. E. Englehart Hospital	Petrolea	1,900 00	5,557 01	.....	2,501 17	9,958 18
Ry., Marine & Gen. Hosp.	Port Arthur	4,920 74	16,379 02	.....	35 20	21,334 96
St. Joseph's Hospital	"	5,417 18	18,620 83	.....	2,713 01	26,751 02
General Hospital	Port Hope	800 00	7,295 11	740 34	386 63	9,222 08
Victoria General Hospital	Renfrew	1,650 00	8,831 67	.....	2,408 83	12,890 50
General and Marine Hospital	St. Catharines	7,942 00	24,279 38	90 25	3,887 07	36,198 70
Consumptive Sanatorium	"	3,277 50	756 60	130 31	250 50	4,414 91
Amasa Wood Hospital	St. Thomas	3,000 00	16,434 45	.....	2,391 32	21,825 77
General Hospital	Sarnia	1,600 00	14,145 61	1,208 18	3,218 43	20,172 22
General Hospital	Sault Ste. Marie	3,051 30	23,454 45	.....	5,646 00	32,151 75
Public Hospital	Smith's Falls	1,650 00	11,490 66	986 62	4,414 03	18,541 31
St. Francis' Hospital	"	1,050 00	4,571 30	.....	3,323 27	8,944 57
General Hospital	Stratford	3,085 00	15,680 97	12 50	3,804 76	22,583 23
General Hospital	Strathroy	1,531 00	4,136 82	.....	761 45	6,429 27
St. Joseph's Hospital	Sudbury	721 00	26,397 10	.....	2,385 62	29,503 72
General Hospital	Toronto	109,269 13	266,925 78	51,792 30	15,563 02	443,550 73
Grace Hospital	"	13,442 23	45,081 78	2,482 24	.....	61,006 25

TABLE IV.—Relative to income of Hospitals.—Concluded.

Hospitals.	Location.	Amount received from municipalities as a grant and for patients' maintenance.	Amount received from patients for board.	Amount received as income from property or investments belonging to hospital.	Subscriptions and donations of private individuals and incidental receipts.	Total receipts from all sources other than the Government grant.
		$ c.	$ c.	$ c.	$ c.	$ c.
Hospital for Sick Children.	Toronto.....	61,935 20	29,026 59	2,140 45	50,946 07	147,048 31
Orthopedic Hospital	"	.....	13,407 57	56 12	6,840 15	20,303 84
The Preventorium	"	18,860 10	74 20	.....	164 84	19,099 14
St. John's Hospital	"	1,018 00	14,158 92	68 50	1,892 83	17,138 25
St. Michael's Hospital	"	46,128 00	77,555 77	.....	22,528 23	146,212 00
Wellesley Hospital	"	39 00	98,433 66	.....	.....	98,472 66
Western Hospital	"	23,205 08	88,364 13	.....	8,505 19	120,074 40
Women's College Hospital.	"	1,321 75	7,333 25	.....	632 51	9,287 51
General Hospital	Walkerton.....	1,630 00	6,335 65	.....	1,992 51	9,958 16
General Hospital	Welland.....	.....	15,818 94	.....	1,780 37	17,599 31
Toronto Free Hos. for Con..	Weston.....					
King Edward Sanatorium..	"	100,524 85	7,951 18	471 91	23,331 65	132,279 59
Queen Mary Hos. for Child'n.	"					
Hotel Dieu Hospital	Windsor.....	2,738 21	25,615 55	.....	6,547 97	34,901 73
General Hospital	Wingham.....	683 12	4,102 00	.....	105 34	4,890 46
General Hospital	Woodstock.....	2,524 11	13,127 93	1,226 69	170 00	17,048 73
Totals for 1917.....	.....	937,158 14	2,002,576 05	96,237 83	332,929 09	3,368,901 11
Totals for 1916.....	.....	891,881 43	1,595,715 56	79,605 72	339,702 09	2,906,904 80

TABLE V.—Showing the basis on

Hospitals.	Location.	Collective days' stay upon which Hospital grants are based.	Amount of grant for proper Hospital cases.
			$ c.
Victoria Hospital	Almonte	1,265	253 00
Royal Victoria Hospital	Barrie	16,535	3,307 00
General Hospital	Belleville	6,234	1,246 80
General Hospital	Bowmanville	3,417	683 40
General Hospital	Brantford	14,914	2,982 80
General Hospital	Brockville	3,666	733 20
St. Vincent de Paul Hospital	"	10,655	2,131 00
Lady Minto Hospital	Chapleau	1,683	336 60
General Hospital	Chatham	2,480	496 00
St. Joseph's Hospital	"	2,962	592 40
Cottage Hospital	Cobourg	3,132	626 40
Lady Minto Hospital	Cochrane	2,199	439 80
General and Marine Hospital	Collingwood	4,820	964 00
General Hospital	Cornwall	4,507	901 40
Hotel Dieu Hospital	"	9,386	1,877 20
Royal Alexandra Hospital	Fergus	1,377	275 40
McKellar General Hospital	Fort William	8,967	1,793 40
General Hospital	Galt	5,383	1,076 60
General and Marine Hospital	Goderich	874	174 80
General Hospital	Guelph	12,793	2,558 60
St. Joseph's Hospital	"	7,272	1,454 40
City Hospital	Hamilton	66,017	13,203 40
St. Joseph's Hospital	"	13,666	2,733 20
Providence Hospital	Haileybury	10,537	2,107 40
General Hospital	Ingersoll	2,479	495 80
General Hospital	Kenora	1,655	331 00
St. Joseph's Hospital	"	1,929	385 80
General Hospital	Kincardine	1,373	274 60
General Hospital	Kingston	14,547	2,909 40
Hotel Dieu Hospital	"	18,314	3,662 80
Kitchener and Waterloo Hospital	Kitchener	5,075	1,015 00
General Hospital	London	34,424	6,884 80
St. Joseph's Hospital	"	5,830	1,166 00
Ross Memorial Hospital	Lindsay	3,319	663 80
General Hospital	Mattawa	7,938	1,587 60
General Hospital	Midland	2,219	443 80
Lady Minto Hospital	New Liskeard	2,487	497 40
General Hospital	Niagara Falls	4,356	871 20
Queen Victoria Hospital	North Bay	2,168	433 60
General Hospital	Orangeville	1,686	337 20
General Hospital	Orillia	6,913	1,382 60
General Hospital	Oshawa	5,376	1,075 20
General Protestant Hospital	Ottawa	14,453	2,890 60
Roman Catholic Hospital	"	23,282	4,656 40
Maternity Hospital	"	1,962	392 40
Misericordia Maternity Hospital	"	5,026	1,005 20
St. Luke's General Hospital	"	8,503	1,700 60
General and Marine Hospital	Owen Sound	1,882	376 40
General Hospital	Parry Sound	2,602	520 40
St. Joseph's Hospital	"	3,875	775 00
General Hospital	Pembroke	11,408	2,281 60
Cottage Hospital	"	1,780	356 00
General Hospital	Penetanguishene	864	172 80
Nicholls' Hospital	Peterborough	7,076	1,415 20
St. Joseph's Hospital	"	6,123	1,224 60
Charlotte E. Englehart Hospital	Petrolea	3,196	639 20
Railway, General and Marine Hospital	Port Arthur	9,767	1,953 40
St. Joseph's Hospital	"	6,099	1,219 80
General Hospital	Port Hope	3,790	758 00
Victoria General Hospital	Renfrew	3,185	637 00
General and Marine Hospital	St. Catharines	5,191	1,038 20
Amasa Wood Hospital	St. Thomas	7,260	1,452 00
General Hospital	Sarnia	3,295	659 00
General Hospital	Sault Ste. Marie	6,821	1,364 20
Public Hospital	Smith's Falls	5,800	1,160 00
St. Francis' Hospital	"	5,415	1,083 00
General Hospital	Stratford	4,557	911 40
General Hospital	Strathroy	2,242	448 40
St. Joseph's Hospital	Sudbury	14,817	2,963 40
General Hospital	Toronto	98,499	19,699 80
Grace Hospital	"	15,232	3,046 40
Hospital for Sick Children	"	54,354	10,870 80
Orthopedic Hospital	"	1,075	215 00
St. John's Hospital	"	5,344	1,068 80
St. Michael's Hospital	"	62,425	12,485 00
Wellesley Hospital	"	131	26 20
Western Hospital	"	30,329	6,065 80
Women's College Hospital	"	4,494	898 80
General Hospital	Walkerton	1,131	226 20
General Hospital	Welland	9,607	1,921 40
Hotel Dieu Hospital	Windsor	9,709	1,941 80
General Hospital	Wingham	882	176 40
General Hospital	Woodstock	4,019	803 80
Totals for 1917		804,331	160,866 20
Totals for 1916		939,011	187,802 20

which statutory aid is granted.

Collective days' stay upon which computation of Refuge rate is based.	Computation of 7 cents per day being Refuge rate for improper cases for Hospital treatment.	Days at 30c.	$ c.	Days at $1.25	$ c.	Amount payable to each Hospital from appropriation by the Legislature of 1917.
	$ c.		$ c.			$ c.
157	10 99	96	28 80	.....	.....	292 79
416	29 12	478	143 40	.....	.....	3,479 52
434	30 38	260	78 00	.....	.....	1,355 18
197	13 79	251	75 30	.....	.....	772 49
3,120	218 40	824	247 20	.....	.....	3,448 40
1,222	85 54	217	65 10	.....	.....	883 84
1,025	71 75	637	191 10	.....	.....	2,393 85
141	9 87	82	24 60	.....	.....	371 07
1,701	119 07	131	39 30	.....	.....	654 37
692	48 44	41	12 30	.....	.....	653 14
336	23 52	172	51 60	.....	.....	791 52
354	24 78	233	69 90	43	53 75	588 23
1,864	130 48	146	43 80	.....	.....	1,138 28
159	11 13	210	63 00	.....	.....	975 58
855	59 85	517	155 10	.....	.....	2,092 15
330	23 10	64	19 20	.....	.....	317 70
3,799	265 93	590	177 00	128	160 00	2,396 33
719	50 33	198	59 40	.....	.....	1,186 33
33	2 31	59	17 70	.....	.....	194 81
1,283	89 81	8	2 40	.....	.....	2,650 81
747	52 29	287	86 10	.....	.....	1,592 79
23,392	1,637 44	2,831	849 30	.....	.....	15,690 14
1,114	77 98	975	292 50	.....	.....	3,103 68
1,698	118 86	609	182 70	32	40 00	2,448 96
43	3 01	229	68 70	.....	.....	567 51
564	39 48	62	18 60	.....	.....	380 08
4,924	344 68	112	33 60	3	3 75	767 83
71	4 97	176	52 80	.....	.....	332 37
7,404	518 28	767	230 10	.....	.....	3,657 78
2,954	206 78	712	213 60	.....	.....	4,083 18
1,313	91 91	31	9 30	.....	.....	1,116 21
12,760	893 20	677	203 10	.....	.....	7,981 10
1,786	125 02	164	49 20	.....	.....	1,340 22
534	23 38	296	88 80	.....	.....	775 98
326	22 82	343	102 90	220	275 00	1,988 32
417	29 19	196	58 80	.....	.....	531 79
690	48 30	62	18 60	21	26 25	590 55
1,069	74 83	107	32 10	.....	.....	978 13
241	16 87	149	44 70	.....	.....	495 17
21	1 47	206	61 80	.....	.....	400 47
1,090	76 30	445	133 50	.....	.....	1,592 40
141	9 87	555	166 50	.....	.....	1,251 57
4,407	308 49	454	136 20	.....	.....	3,335 29
7,311	511 77	1,076	322 80	.....	.....	5,490 97
.....	.....	213	63 90	.....	.....	456 30
16,709	1,169 63	70	21 00	.....	.....	2,195 83
2,707	189 49	371	111 30	.....	.....	2,001 39
249	17 43	69	20 70	.....	.....	414 53
170	11 90	.....	.....	.....	.....	532 30
390	27 30	344	103 20	.....	.....	905 50
1,106	77 42	622	186 60	.....	.....	2,545 62
143	10 01	41	12 30	.....	.....	378 31
83	5 81	112	33 60	.....	.....	212 21
698	48 86	469	140 70	.....	.....	1,604 76
778	54 46	282	84 60	.....	.....	1,363 66
68	4 76	154	46 20	.....	.....	690 16
372	26 04	337	101 10	.....	.....	2,080 54
1,072	75 04	215	64 50	51	63 75	1,423 09
419	29 33	198	59 40	.....	.....	846 73
626	43 82	255	76 50	.....	.....	757 32
2,026	141 82	330	99 00	.....	.....	1,279 02
703	49 21	479	143 70	.....	.....	1,644 91
716	50 12	73	21 90	.....	.....	731 02
2,600	182 00	133	39 90	121	151 25	1,737 35
2,319	162 33	338	101 40	.....	.....	1,423 73
512	35 84	278	83 40	.....	.....	1,202 24
359	25 13	308	92 40	.....	.....	1,028 93
573	40 11	160	48 00	.....	.....	536 51
2,088	146 16	867	260 10	296	370 00	3,739 66
8,349	584 43	2,174	652 20	.....	.....	20,936 43
448	31 36	331	99 30	.....	.....	3,177 06
9,774	684 18	1,994	598 20	.....	.....	12,153 18
1,225	85 75	.....	.....	.....	.....	300 75
110	7 70	420	126 00	.....	.....	1,202 50
6,384	446 88	1,776	532 80	.....	.....	13,464 68
.....	.....	14	4 20	.....	.....	30 49
5,653	395 71	711	213 30	.....	.....	6,674 81
80	5 60	485	145 50	.....	.....	1,049 90
71	4 97	66	19 80	.....	.....	250 97
867	60 69	859	257 70	.....	.....	2,239 79
417	29 19	976	292 80	.....	.....	2,263 79
231	16 17	.....	.....	.....	.....	192 57
591	41 37	165	49 50	.....	.....	894 67
165,340	11,573 80	33,424	10,027 20	915	1,143 75	183,610 95
154,716	10,830 12	.....	.....	.....	.....	198,632 32

TABLE VI.—Showing the cost of maintaining the Hospitals, also the average daily cost per patient, etc.

Hospitals.	Location.	Collective days' stay, exclusive of infants under one year of age.	Cost of dietaries	Salaries, fuel, light, medicine, bedding and all other expenditure on maintenance account	Total expenditure for maintenance.	Average cost of each patient per day.
			$ c.	$ c.	$ c.	$ c.
Victoria Hospital	Almonte	1,952	1,228 58	3,707 71	4,936 29	2.53
Royal Victoria Hospital	Barrie	20,033	5,173 48	11,217 71	16,391 19	.82
General Hospital	Belleville	13,422	6,892 91	21,131 95	28,024 86	2.09
General Hospital	Bowmanville	3,865	2,454 24	6,474 50	8,928 74	2.31
General Hospital	Brantford	26,165	17,607 22	40,294 32	57,901 54	2.21
Brant Sanatorium	"	7,036	3,952 93	7,362 89	11,315 82	1.61
General Hospital	Brockville	15,518	7,941 55	18,265 87	26,207 42	1.69
St. Vincent de Paul Hospital	"	18,595	13,555 58	16,296 49	29,852 07	1.61
Lady Minto Hospital	Chapleau	1,906	1,306 60	3,965 11	5,271 71	2.77
General Hospital	Chatham	14,744	8,723 95	16,956 24	25,680 19	1.74
St. Joseph's Hospital	"	10,862	8,993 10	9,628 08	18,621 18	1.71
Cottage Hospital	Cobourg	3,640	2,661 27	6,906 56	9,567 83	2.63
Lady Minto Hospital	Cochrane	2,829	956 23	5,590 63	6,546 86	2.31
General and Marine Hospital	Collingwood	12,844	6,600 10	10,021 89	16,621 99	1.29
General Hospital	Cornwall	11,419	5,459 64	10,543 54	16,003 18	1.40
Hotel Dieu Hospital	"	13,950	8,798 43	10,292 69	19,091 12	1.37
Royal Alexandra Hospital	Fergus	5,436	4,793 41	8,108 99	12,902 40	2.37
McKellar General Hospital	Fort William	22,356	12,865 78	31,458 14	44,323 92	1.98
General Hospital	Galt	11,826	10,127 75	13,751 44	23,879 19	2.02
General and Marine Hospital	Goderich	2,233	1,362 68	3,896 77	5,259 45	2.36
Muskoka Cottage Sanatorium	Gravenhurst	20,303	34,296 12	31,103 22	65,399 31	3.22
Muskoka Free Hosp. for Con	"	83,048	62,044 29	126,390 59	188,434 88	2.27
General Hospital	Guelph	22,656	14,464 50	40,580 38	55,044 88	2.43
St. Joseph's Hospital	"	12,497	8,795 59	10,239 09	19,034 68	1.52
City Hospital	Hamilton	105,174	62,089 45	134,977 88	197,067 33	1.87
St. Joseph's Hospital	"	27,718	14,489 28	23,618 50	38,107 78	1.37
Mountain Sanatorium	"	45,098	19,008 67	33,553 37	52,562 04	1.17
Providence Hospital	Haileybury	12,876	9,015 57	12,621 05	21,636 62	1.68
General Hospital	Ingersoll	2,751	2,162 45	4,319 57	6,482 02	2.36
General Hospital	Kenora	3,659	2,809 08	5,375 31	8,184 39	2.24
St. Joseph's Hospital	"	7,898	1,862 86	6,033 39	7,896 25	1.00
General Hospital	Kincardine	1,620	978 31	4,034 15	5,012 46	3.09
General Hospital	Kingston	44,902	32,403 50	42,605 74	75,009 24	1.67
Hotel Dieu Hospital	"	31,074	20,492 74	23,930 71	44,423 45	1.43
Essex Health Association	Kingsville	7,310	3,874 64	8,917 38	12,792 02	1.75
Kitchener and Waterloo Hosp	Kitchener	14,272	7,538 57	19,337 71	26,876 28	1.88
General Hospital	London	66,131	58,384 32	115,208 07	173,592 39	2.62
St. Joseph's Hospital	"	26,788	22,192 91	33,581 81	55,774 72	2.08
Queen Alexandra Sanatorium	"	20,202	13,875 16	27,221 16	41,096 32	2.34
Ross Memorial Hospital	Lindsay	7,303	4,952 05	8,971 60	13,923 65	1.91
General Hospital	Mattawa	9,458	2,358 30	4,347 03	6,705 33	.71
General Hospital	Midland	4,583	1,568 32	4,951 03	6,519 35	1.42
Lady Minto Hospital	New Liskeard	3,260	1,501 68	4,480 77	5,982 45	1.84
General Hospital	Niagara Falls	7,707	5,312 97	11,592 40	16,905 37	2.19
Queen Victoria Hospital	North Bay	4,430	4,182 74	7,727 12	11,909 86	2.69
General Hospital	Orangeville	1,913	1,968 04	3,132 53	5,100 57	2.67
General Hospital	Orillia	8,448	3,293 94	9,603 44	12,897 38	1.52
General Hospital	Oshawa	6,072	3,638 84	9,556 31	13,195 15	2.17
General Protestant Hospital	Ottawa	42,439	28,086 00	64,034 28	92,120 28	2.12
Roman Catholic Hospital	"	55,088	23,863 78	55,701 25	79,565 03	1.44
Maternity Hospital	"	6,886	5,233 71	13,639 84	18,873 55	2.74
Misericordia Maternity Hosp	"	22,211	10,059 99	12,485 38	22,545 37	1.02
St. Luke's General Hospital	"	33,863	22,534 80	41,708 24	64,243 04	1.89
Royal Sanatorium	"	21,871	9,633 65	26,865 92	36,499 57	1.67
General and Marine Hospital	Owen Sound	7,065	6,353 03	11,708 10	18,061 13	2.56
General Hospital	Parry Sound	3,800	2,703 53	5,470 87	8,174 40	2.15
St. Joseph's Hospital	"	4,609	2,381 60	3,503 25	5,887 85	1.28
General Hospital	Pembroke	16,664	6,550 93	11,531 00	18,081 93	1.08
The Cottage Hospital	"	3,895	2,426 32	6,444 30	8,870 62	2.27
General Hospital	Penetang	1,059	1,454 37	2,092 54	3,546 91	3.35
Nicholls' Hospital	Peterborough	14,304	8,351 86	23,116 45	31,468 31	2.20
St. Joseph's Hospital	"	10,550	5,023 01	9,166 14	14,189 15	1.34
C. E. Englehart Hospital	Petrolea	3,418	2,329 96	7,311 33	9,641 29	2.82
Railway, Marine and Gen. Hosp	Port Arthur	10,476	5,525 10	14,134 54	19,659 64	1.88
St. Joseph's Hospital	"	15,500	8,001 26	21,393 01	29,394 27	1.90
General Hospital	Port Hope	4,407	1,959 46	7,379 94	9,339 40	2.12
Victoria General Hospital	Renfrew	7,383	4,841 83	8,334 94	13,176 77	1.78
General and Marine Hospital	St. Catharines	17,781	13,376 43	24,377 93	37,754 36	2.12
Consumptive Sanatorium	"	3,728	1,749 10	3,270 58	5,019 68	1.35
Amasa Wood Hospital	St. Thomas	11,326	7,885 92	12,943 86	20,829 78	1.84
General Hospital	Sarnia	9,676	7,207 88	18,199 65	25,407 53	2.62
General Hospital	Sault Ste. Marie	17,006	9,398 70	25,463 70	34,862 40	2.05
Public Hospital	Smith's Falls	8,457	5,202 31	13,296 55	18,498 86	2.19
St. Francis' Hospital	"	7,514	5,147 88	4,768 42	9,916 30	1.32
General Hospital	Stratford	9,305	6,862 01	15,642 42	22,504 43	2.42
General Hospital	Strathroy	2,975	1,419 40	5,736 03	7,155 43	2.41
St. Joseph's Hospital	Sudbury	23,218	12,352 61	21,217 59	33,570 20	1.45
General Hospital	Toronto	183,232	162,827 44	324,552 38	487,379 82	2.66

TABLE VI.—Showing the cost of maintaining the Hospitals, also the average daily cost per patient, etc.—Concluded.

Hospitals.	Location.	Collective days' stay, exclusive of infants under one year of age.	Cost of dietaries.	Salaries, fuel, light, medicine, bedding and all other expenditure on maintenance account.	Total expenditure for maintenance.	Average cost of each patient per day.
			$ c.	$ c.	$ c.	$ c.
Grace Hospital	Toronto	31,320	19,957 83	50,710 20	70,668 03	2.26
Hospital for Sick Children	"	75,084	35,861 87	154,083 20	189,945 07	2.51
Orthopedic Hospital	"	7,743	3,822 02	15,809 68	19,631 70	2.54
The Preventorium	"	15,951	6,041 98	9,455 65	15,497 63	.97
St. John's Hospital	"	5,874	7,212 21	11,067 69	18,279 90	3.11
St. Michael's Hospital	"	92,213	70,010 51	109,373 64	179,384 15	1.95
Wellesley Hospital	"	19,202	29,803 03	52,590 55	82,393 58	4.29
Western Hospital	"	67,013	37,525 60	101,587 64	139,113 24	2.08
Women's College Hospital	"	5,059	3,605 07	9,306 90	12,911 97	2.55
General Hospital	Walkerton	3,422	3,030 21	5,721 14	8,751 35	2.56
General Hospital	Welland	11,333	4,970 27	9,967 21	14,937 48	1.32
Toronto Free Hosp. for Con.	Weston	110,381	69,346 76	151,087 17	220,433 93	1.99
King Edward Sanatorium	"					
Queen Mary Hosp. for Children	"					
Hotel Dieu Hospital	Windsor	18,669	17,048 89	20,621 87	37,670 76	2.02
General Hospital	Wingham	2,070	1,361 20	3,756 59	5,117 79	2.47
General Hospital	Woodstock	9,429	6,959 53	11,021 63	17,981 16	1.90
Totals for 1917		1,884,856	1,258,314 17	2,555,534 02	3,813,848 19	2.02
Totals for 1916		1,878,436	1,047,180 16	2,174,265 91	3,221,446 07	1.71

TABLE VII.—Showing the proportion of maintenance of Hospitals paid by the Government.

Hospitals.	Location.	Revenues on maintenance account, exclusive of Government grant.	Government grant in aid of maintenance.	Total revenue for maintenance.	Total expenditure for maintenance.	Percentage of Government grant to total expenditure for maintenance.
		$ c.	$ c.	$ c.	$ c.	
Victoria Hospital	Almonte	3,939 50	596 86	4,536 36	4,936 29	12.1
Royal Victoria Hospital	Barrie	14,586 70	3,741 06	18,327 76	16,391 19	22.8
General Hospital	Belleville	26,318 33	1,385 16	27,703 49	28,024 86	4.9
General Hospital	Bowmanville	9,225 17	718 97	9,944 14	8,928 74	8.0
General Hospital	Brantford	53,252 04	3,534 38	56,786 42	57,901 54	6.1
Brant Sanatorium	"	8,491 93	2,070 86	10,562 79	11,315 82	18.3
General Hospital	Brockville	27,590 77	721 52	28,312 29	26,207 42	2.3
St. Vincent de Paul Hospital	"	27,362 25	2,488 57	29,850 82	29,852 07	8.3
Lady Minto Hospital	Chapleau	6,022 14	348 14	6,370 28	5,271 71	6.6
General Hospital	Chatham	24,762 19	978 04	25,740 23	25,680 19	3.8
St. Joseph's Hospital	"	18,179 00	643 06	18,822 06	18,621 18	3.4
Cottage Hospital	Cobourg	8,294 10	1,041 41	9,335 51	9,567 83	10.9
Lady Minto Hospital	Cochrane	5,611 19	230 50	5,841 69	6,546 86	3.5
General and Marine Hospital	Collingwood	15,687 11	902 02	16,589 13	16,621 99	5.4
General Hospital	Cornwall	20,538 80	999 97	21,538 77	16,003 18	6.2
Hotel Dieu Hospital	"	16,951 48	2,246 51	19,197 99	19,091 12	11.8
Royal Alexandra Hospital	Fergus	13,782 10	346 49	14,128 59	12,902 40	2.7
McKellar General Hospital	Fort William	40,055 80	2,667 46	42,723 26	44,323 92	6.0
General Hospital	Galt	21,801 02	1,199 44	23,000 46	23,879 19	5.0
General and Marine Hospital	Goderich	4,938 91	322 53	5,261 44	5,259 45	7.5
Muskoka Cottage Sanatorium	Gravenhurst	58,491 65	.....	58,491 65	65,399 34	.....
Muskoka Free Hosp. for Con	"	119,205 93	41,131 29	160,337 22	188,434 88	21.0
General Hospital	Guelph	40,608 09	2,951 14	43,559 23	55,044 88	5.4
St. Joseph's Hospital	"	17,247 33	2,208 82	19,456 15	19,034 68	11.6
City Hospital	Hamilton	179,436 00	15,209 41	194,645 41	197,067 33	7.7
St. Joseph's Hospital	"	35,127 94	2,800 24	37,928 18	38,107 78	7.3
Mountain Sanatorium	"	29,210 69	14,936 15	44,146 84	52,562 04	28.4
Providence Hospital	Haileybury	21,754 15	1,878 19	23,632 34	21,636 62	8.7
General Hospital	Ingersoll	16,893 82	488 52	17,382 34	6,482 02	7.5
General Hospital	Kenora	7,481 40	290 50	7,771 90	8,184 39	3.6
St. Joseph's Hospital	"	7,348 54	556 85	7,905 39	7,896 25	7.1
General Hospital	Kincardine	4,779 04	190 66	4,969 70	5,012 46	3.8
General Hospital	Kingston	72,182 91	3,130 83	75,313 74	75,009 24	4.2
Hotel Dieu Hospital	"	40,488 21	4,155 00	44,643 21	44,423 45	9.4
Essex Health Association	Kingsville	10,824 22	2,831 58	13,655 80	12,792 02	22.1
Kitchener and Waterloo Hosp.	Kitchener	27,173 82	964 44	28,138 26	26,876 28	3.6
General Hospital	London	158,743 55	8,478 31	167,221 86	173,592 39	4.9
St. Joseph's Hospital	"	54,151 15	1,689 50	55,840 65	55,774 72	3.0
Queen Alexandra Sanatorium	"	33,454 40	10,743 43	44,197 83	41,096 32	26.1
Ross Memorial Hospital	Lindsay	14,581 68	752 69	15,334 37	13,923 65	5.4
General Hospital	Mattawa	5,245 06	1,524 89	6,769 95	6,705 33	22.7
General Hospital	Midland	7,244 56	322 13	7,566 69	6,519 35	4.9
Lady Minto Hospital	New Liskeard	7,219 79	503 56	7,723 35	5,982 45	8.4
General Hospital	Niagara Falls	16,326 88	1,228 49	17,555 37	16,905 37	7.3
Queen Victoria Hospital	North Bay	11,704 77	763 03	12,467 80	11,909 86	6.4
General Hospital	Orangeville	5,100 20	314 98	5,415 18	5,100 57	6.2
General Hospital	Orillia	9,907 22	1,289 32	11,196 54	12,897 38	10.0
General Hospital	Oshawa	13,833 74	1,465 31	15,299 05	13,195 15	11.1
General Protestant Hospital	Ottawa	88,351 03	3,627 58	91,978 61	92,120 28	3.9
Roman Catholic Hospital	"	78,937 16	5,558 48	84,495 64	79,565 03	7.0
Maternity Hospital	"	18,649 38	502 80	19,152 18	18,873 55	2.7
Misericordia Maternity Hosp.	"	16,904 50	2,601 95	19,506 45	22,545 37	11.5
St. Luke's General Hospital	"	63,327 55	2,224 41	65,551 96	64,243 04	3.5
Royal Sanatorium	"	27,359 85	9,139 72	36,499 57	36,499 57	25.1
General and Marine Hospital	Owen Sound	16,265 96	880 92	17,166 88	18,061 13	4.9
General Hospital	Parry Sound	7,318 15	856 25	8,174 40	8,174 40	10.4
St. Joseph's Hospital	"	6,812 85	1,189 58	7,993 43	5,887 85	20.1
General Hospital	Pembroke	16,287 70	2,632 34	18,920 04	18,081 93	14.5
The Cottage Hospital	"	8,528 98	616 23	9,145 21	8,870 62	7.4
General Hospital	Penetang	3,250 43	330 81	3,581 24	3,546 91	9.3
Nicholls' Hospital	Peterborough	31,000 22	1,691 92	32,692 14	31,468 31	5.4
St. Joseph's Hospital	"	12,936 82	1,442 60	14,379 42	14,189 15	10.2
C. E. Englehart Hospital	Petrolea	9,958 18	750 68	10,708 86	9,641 29	7.8
Railway, Marine and Gen. Hosp.	Port Arthur	21,334 96	1,655 12	22,990 08	19,659 64	8.4
St. Joseph's Hospital	"	26,751 02	2,014 23	28,765 25	29,394 27	6.9
General Hospital	Port Hope	9,222 08	721 06	9,943 14	9,339 40	7.7
Victoria General Hospital	Renfrew	12,890 50	736 16	13,626 66	13,176 77	5.3
General and Marine Hospital	St. Catharines	36,198 70	1,555 66	37,754 36	37,754 36	4.0
Consumptive Sanatorium	"	4,414 91	1,146 86	5,561 77	5,019 68	22.8
Amasa Wood Hospital	St. Thomas	21,825 77	1,638 73	23,464 50	20,829 78	7.9
General Hospital	Sarnia	20,172 22	1,172 57	21,344 79	25,407 53	4.6
General Hospital	Sault Ste. Marie	32,151 75	2,551 27	34,703 02	34,862 40	7.3
Public Hospital	Smith's Falls	18,541 31	1,557 06	20,098 37	18,498 86	8.2
St. Francis' Hospital	"	8,944 57	867 15	9,811 72	9,916 30	8.7
General Hospital	Stratford	22,585 23	1,528 51	24,111 74	22,504 43	6.8
General Hospital	Strathroy	6,429 27	533 11	6,962 38	7,155 43	7.4
St. Joseph's Hospital	Sudbury	29,503 72	4,224 49	33,728 21	33,570 20	12.5

TABLE VII.—Showing the proportion of maintenance of Hospitals paid by the Government.—Concluded.

Hospitals.	Location.	Revenues on maintenance account, exclusive of Government grant.	Government grant in aid of maintenance.	Total revenue for maintenance.	Total expenditure for maintenance.	Percentage of Government grant to total expenditure for maintenance.
		$ c.	$ c.	$ c.	$ c.	
General Hospital	Toronto	443,550 73	25,555 24	469,105 97	487,379 82	5.2
Grace Hospital	"	61,006 25	4,044 24	65,050 49	70,668 03	5.7
Hospital for Sick Children	"	147,048 31	12,377 49	159,425 80	189,945 07	6.6
Orthopedic Hospital	"	20,303 84	318 99	20,622 83	19,631 70	1.6
The Preventorium	"	19,099 14	5,990 15	25,089 29	15,497 63	38.6
St. John's Hospital	"	17,138 25	957 45	18,095 70	18,279 90	5.2
St. Michael's Hospital	"	146,212 00	16,151 76	162,363 76	179,384 15	9.0
Wellesley Hospital	"	98,472 66	22 40	98,495 06	82,393 58	.....
Western Hospital	"	120,074 40	8,659 26	128,733 66	139,113 24	6.2
Women's College Hospital	"	9,287 51	1,139 99	10,427 50	12,911 97	8.7
General Hospital	Walkerton	9,958 16	442 91	10,401 07	8,751 35	5.0
General Hospital	Welland	17,599 31	2,013 67	19,612 98	14,937 48	13.5
Toronto Free Hosp. for Con. / King Edward Sanatorium / Queen Mary Hosp. for Children.	Weston / "	132,279 59	48,013 29	180,292 88	220,133 93	21.7
Hotel Dieu Hospital	Windsor	34,901 73	2,562 84	37,464 57	37,670 76	6.8
General Hospital	Wingham	4,890 46	455 90	5,346 36	5,117 79	8.9
General Hospital	Woodstock	17,048 73	988 46	18,037 19	17,981 16	5.5
Totals for 1917		3,368,901 11	335,615 50	3,704,516 61	3,813,848 19	11.3
Totals for 1916		2,906,904 80	313,956 21	3,220,861 01	3,221,446 07	9.7

TABLE VIII.—Showing the comparative cost per patient daily in the different Hospitals in periods of five years.

Hospitals.	Location.	1905	1910	1915	1916	1917
		$ c.	$ c.	$ c.	$ c.	$ c.
Victoria Hospital	Almonte	.....	1.23	2.50	1.05	2.53
Royal Victoria Hospital	Barrie	.93	1.14	1.31	.68	.82
General Hospital	Belleville	1.63	1.09	1.21	1.21	2.09
General Hospital	Bowmanville	.....	.....	1.73	1.99	2.31
General Hospital	Brantford	.78	1.19	1.75	1.92	2.21
Brant Sanatorium	"	.....	.....	1.90	1.19	1.61
General Hospital	Brockville	1.39	1.12	1.47	2.19	1.69
St. Vincent de Paul Hospital	"	.87	1.16	1.48	1.32	1.61
Lady Minto Hospital	Chapleau	.....	.....	2.67	2.71	2.77
General Hospital	Chatham	.87	1.00	1.61	1.62	1.74
St. Joseph's Hospital	"	.72	.82	1.52	1.65	1.71
Cottage Hospital	Cobourg	.....	1.66	1.73	1.73	2.63
Lady Minto Hospital	Cochrane	.....	.....	.....	2.16	2.31
General and Marine Hospital	Collingwood	.96	1.01	1.34	1.40	1.29
General Hospital	Cornwall	.74	.92	1.13	1.26	1.40
Hotel Dieu Hospital	"	.53	.75	.96	1.12	1.37
Royal Alexandra Hospital	Fergus	.....	1.52	2.16	2.43	2.37
McKellar General Hospital	Fort William	1.08	1.66	1.90	1.64	1.98
General Hospital	Galt	1.12	1.55	1.49	1.70	2.02
General and Marine Hospital	Goderich	.....	1.73	2.05	2.31	2.36
Muskoka Cottage Sanatorium	Gravenhurst	2.05	1.89	4.74	3.00	3.22
Muskoka Free Hospital for Cons.	"		1.14	1.62	1.67	2.27
General Hospital	Guelph	1.16	.95	1.43	2.02	2.43
St. Joseph's Hospital	"	.84	1.03	1.11	1.16	1.52
City Hospital	Hamilton	1.14	1.37	1.53	1.63	1.87
St. Joseph's Hospital	"	.78	1.02	1.24	1.28	1.37
Mountain Sanatorium	"	.....	.99	1.07	1.18	1.17
Providence Hospital	Haileybury	.....	.....	1.97	1.59	1.68
General Hospital	Ingersoll	.....	2.19	1.74	2.21	2.36
General Hospital	Kenora	1.46	2.16	1.16	2.17	2.24
St. Joseph's Hospital	"	2.26	1.19	1.43	1.15	1.00
General Hospital	Kincardine	.....	2.35	3.83	4.33	3.09
General Hospital	Kingston	.79	.96	1.41	1.41	1.67
Hotel Dieu Hospital	"	.55	.65	1.03	1.09	1.43
Mowat Sanatorium	"	.....	.....	1.26	1.32	.....
Essex Health Association	Kingsville	.....	.....	1.29	1.53	1.75
Kitchener and Waterloo Hospital	Kitchener	1.64	1.64	1.53	1.75	1.89
General Hospital	London	1.26	1.62	2.10	2.17	2.62
St. Joseph's Hospital	"	1.23	1.24	1.66	1.83	2.08
Queen Alexandra Sanatorium	"	.....	2.11	1.10	1.13	2.34
Ross Memorial Hospital	Lindsay	1.89	1.52	1.94	1.72	1.91
General Hospital	Mattawa	.96	.91	.61	.87	.71
General Hospital	Midland	2.10	1.74	1.56	2.17	1.42
Lady Minto Hospital	New Liskeard	.....	1.29	1.59	1.96	1.68
General Hospital	Niagara Falls	.....	1.54	2.01	2.19	2.19
Queen Victoria Hospital	North Bay	1.33	1 07	1.80	1.85	2.69
General Hospital	Orangeville	.....	.....	2.00	2.84	2.67
General Hospital	Orillia	.....	1.12	1.40	1.48	1.52
General Hospital	Oshawa	.....	8.23	1.46	1.58	2.17
General Protestant Hospital	Ottawa	1.29	1.28	1.76	2.50	2.12
Roman Catholic Hospital	"	81	1.02	1.04	1.44	1.44
Maternity Hospital	"	2.03	1.97	2.24	2.25	2.74
Misericordia Maternity Hospital	"	.....	.....	.....	.77	1.02
St. Luke's General Hospital	"	.87	1.62	1.73	1.88	1.89
Royal Sanatorium	"	.....	1.84	1.49	1.57	1.67
General and Marine Hospital	Owen Sound	.89	1.11	1.87	1.67	2.56
General Hospital	Parry Sound	.....	1.61	1.58	1.45	2.15
St. Joseph's Hospital	"	.....	.....	.....	.67	1.27
General Hospital	Pembroke	.53	.69	.97	.97	1.08
The Cottage Hospital	"	.97	1.12	2.00	1.48	2.27
General Hospital	Penetang	.....	.....	2.47	2.06	3.35
Nicholls' Hospital	Peterborough	1.95	1.73	1.90	1.77	2.20
St. Joseph's Hospital	"	.47	.94	1.39	1.18	1.33
C. E. Englehart Hospital	Petrolea	.....	.....	2.25	2.12	2.82
Railway, Marine and General Hosp.	Port Arthur	.....	1.84	1.70	1.56	1.88
St. Joseph's Hospital	"	1.09	1.35	1.20	1.81	1.90
General Hospital	Port Hope	.....	.....	2.21	1.69	2.12
Victoria General Hospital	Renfrew	1.49	1.11	1.30	1.33	1.78
General and Marine Hospital	St. Catharines	1.08	1.30	1.44	1.70	2.12
Consumptive Sanatorium	"	.....	1.14	.96	1.53	1.35
Amasa Wood Hospital	St. Thomas	1.92	1.97	2.15	1.76	1.84
General Hospital	Sarnia	1.63	1.59	1.28	1.51	2.62
General Hospital	Sault Ste. Marie	.90	1.14	1.81	1.33	2.05
Public Hospital	Smith's Falls	.....	.....	2.04	2.92	2.19
St. Francis' Hospital	"	.78	.72	1.37	1.18	1.32
General Hospital	Stratford	1.17	1.28	1.81	1.70	2.42
General Hospital	Strathroy	.....	.....	1.77	1.83	2.42
St. Joseph's Hospital	Sudbury	1.08	1.06	1.23	1.17	1.44
General Hospital	Toronto	1.28	1.41	2.04	2.30	2.66
Grace Hospital	"	1.00	1.39	1.81	1.94	2.26
Hospital for Sick Children	"	1.25	1.53	2.26	2.35	2.51
Orthopedic Hospital	"	1.10	1.39	1.64	1.35	2.54

TABLE VIII.—Showing the comparative cost per patient daily in the different Hospitals in periods of five years.—Concluded.

Hospitals.	Location.	1905	1910	1915	1916	1917
		$ c.	$ c.	$ c.	$ c.	$ c.
The Preventorium	Toronto	.....	.....	.75	.84	.97
St. John's Hospital	"	.....	.....	.....	.....	3.11
St. Michael's Hospital	"	.90	1.00	1.56	1.57	1.95
Wellesley Hospital	"	.....	.....	.....	.....	4.29
Western Hospital	"	.92	1.02	1.53	1.88	2.08
Women's College Hospital	"	.....	.....	.....	1.84	2.55
General Hospital	Walkerton	2.66	2.27	1.58	2.21	2.56
General Hospital	Welland	.....	1.82	1.27	.95	1.31
Toronto Free Hosp. for Consumptives	Weston	1.53	1.35			
King Edward Sanatorium	"	.....	1.47	1.65	1.65	1.99
Queen Mary Hospital for Children	"	.....	.....			
Hotel Dieu Hospital	Windsor	.76	1.04	1.76	1.61	2.02
General Hospital	Wingham	.....	1.79	2.28	2.28	2.47
General Hospital	Woodstock	1.87	1.34	1.42	1.56	1.97
Averages	.....	1.13	1.26	1.64	1.71	2.02

SEPARATE REPORTS.

VICTORIAN HOSPITAL, ALMONTE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	8
Admitted	136
Births in Hospital	25
Total number under treatment	169
Discharged	154
Died	10
Under treatment, 30th September, 1917	5
	169

Sex.

Male	53
Female	116
	169

Revenue.

From the Province of Ontario	$596 86
From the Town of Almonte	200 00
From the County of Lanark	100 00
From other municipalities	135 00
From endowments, investments, etc.	377 34
From patients themselves for maintenance and treatment.	1,753 32
From subscriptions, donations and bequests from private individuals	850 07
From other sources	523 77
Total	$4,536 36

Expenditures.

Butchers' meat	$312 57
Butter and eggs	250 19
Flour, bread and meal	102 20
Milk	117 22
Tea and coffee	64 05
Potatoes and other vegetables	83 63
Groceries and provisions not enumerated	298 72
Drugs and medicines	123 36
Medical and surgical appliances	63 69
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	27 00
Brooms, brushes, mops, soap and cleaning appliances	19 03
Fuel	450 64
Electric light, gas, oil, candles	28 53
Salaries and wages	2,380 27
Taxes and insurance	67 50
Contingencies	117 77
Repairs, ordinary	351 36
Ice	28 25
Printing, stationery, etc.	36 56
Surgical instruments	13 75
Total	$4,936 29
Government grant for 1917	$292 79

ROYAL VICTORIA HOSPITAL, BARRIE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	39
Admitted	504
Births in Hospital	66
Total number under treatment	609
Discharged	565
Died	25
Under treatment, 30th September, 1917	19
	609

Sex.

Male	274
Female	335
	609

Revenue.

From the Province of Ontario	$3,741 06
From the Town of Barrie	.....
From the County of Simcoe	500 00
From other municipalities	.....
From patients for maintenance	11,734 21
From endowments, investments, etc.	456 00
From subscriptions, donations and bequests from private individuals	255 52
From other sources	1,640 97
Total	$18,327 76

ROYAL VICTORIA HOSPITAL, BARRIE.—*Continued.*

Expenditures.

Butchers' meat	$892 10
Butter and eggs	1,054 39
Flour, bread and meal	598 67
Milk	521 48
Tea and coffee	.....
Potatoes and other vegetables	709 89
Groceries and provisions not enumerated	1,396 95
Drugs and medicines	388 91
Medical and surgical appliances	566 42
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	616 23
Brooms, brushes, mops, soap and cleaning appliances	218 28
Fuel	3,627 52
Electric light, gas, oil and candles	225 01
Water	114 94
Ice supply	90 00
Salaries and wages	4,150 35
Interest	.....
Contingencies	568 69
Repairs, ordinary	397 01
Taxes and insurance	161 00
Surgical instruments	93 35
Total	$16,391 19
Government grant for 1917	$3,479 52

GENERAL HOSPITAL, BELLEVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	24
Admitted	958
Births in Hospital	78
Total number under treatment	1,060
Discharged	983
Died	47
Under treatment, 30th September, 1917	30
	1,060

Sex.

Male	573
Female	487
	1,060

Revenue.

From the Province of Ontario	$1,385 16
From the City of Belleville	1,300 00
From County of Hastings	400 00
From patients for maintenance and treatment	20,871 20
Income from endowments, investments, etc.	209 50
From subscriptions, donations and bequests from private individuals	1,227 94
From other sources	2,309 69
Total	$27,703 49

Expenditures.

Butchers' meat	$1,859 70
Butter and eggs	1,367 72
Flour, bread and meal	553 29
Milk	825 34
Tea and coffee	233 64
Potatoes and other vegetables	551 96
Groceries and provisions not enumerated	1,501 26
Drugs and medicines	1,148 95
Medical and surgical appliances	1,149 51
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	2,566 08
Brooms, brushes, mops, soap and cleaning appliances	301 77
Fuel	2,578 78
Electric light, gas, oil and candles	611 08
Clothing for patients	33 29
Ice supply	75 00
Salaries and wages	6,052 75
Contingencies	5,442 84
Repairs, ordinary	352 30
Stationery and printing	173 25
Taxes, insurance and interest	646 35
Total	$28,024 86
Government grant for 1917	$1,355 18

GENERAL HOSPITAL, BOWMANVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	10
Admitted	231
Births in Hospital	36
Total under treatment	277
Discharged	243
Died	20
Under treatment, 30th September, 1917	14
	277

Sex.

Male	119
Female	158
	277

Revenue.

From the Province of Ontario	$718 97
From Town of Bowmanville	1,000 00
From County of Durham	300 00
From patients for maintenance and treatment	7,120 97
From subscriptions, donations, and bequests from private individuals	636 36
From all other sources	167 84
Total	$8,944 14

Expenditures.

Butchers' meat	$745 00
Butter and eggs	395 34
Flour, bread and meal	92 00
Milk	66 11
Tea and coffee	62 17
Potatoes and other vegetables	88 65
Groceries and provisions not enumerated	1,004 97
Drugs and medicines	274 97
Medical and surgical appliances	697 85
Surgical instruments	50
Beer, wine and spirits	33 13
Bedding, napery and general house furnishings	656 17
Brooms, brushes, mops, soap and cleaning appliances	12 28
Fuel	841 69
Light: gas, oil and candles	236 78
Ice supply	26 03
Salaries and wages	2,218 55
Stationery, printing, postage, etc.	52 05
Contingencies	701 69
Repairs, ordinary	135 43
Laundry	468 22
Taxes and insurance	47 14
Hay and straw	33 90
Water supply	38 12
Total	$8,928 74
Government grant for 1917	$772 49

GENERAL HOSPITAL, BRANTFORD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	89
Admitted	1,794
Births in the Hospital	120
Total number under treatment	2,003
Discharged	1,806
Died	102
Under treatment, 30th September, 1917	95
	2,003

Sex.

Male	897
Female	1,106
	2,003

Revenue.

From the Province of Ontario	$3,534 38
From the City of Brantford	18,000 00
From the County of Brant	1,200 00
From other municipalities	550 00
From patients for maintenance and treatment	32,899 44
Income from endowments, investments, etc.	41 51
From subscriptions, donations and bequests from private individuals	.....
From all other sources	561 09
Total	$56,786 42

Expenditures.

Butchers' meat	$4,669 47
Butter and eggs	3,734 29
Flour, bread and meal	1,418 74
Milk	1,959 52

GENERAL HOSPITAL, BRANTFORD.—*Continued.*

Tea and coffee	783 38
Potatoes and other vegetables	2,142 20
Groceries and provisions not enumerated	2,899 62
Drugs and medicines	3,451 85
Medical and surgical appliances and surgical instruments	3,655 82
Beer, wine and spirits	296 40
Bedding, napery and general house furnishings	1,611 31
Brooms, brushes, mops, soap and cleaning appliances	457 70
Fuel	8,245 64
Electric light, gas, oil, candles	1,546 90
Ice	325 00
Salaries and wages	16,309 12
Taxes and insurance	1,074 66
Printing, stationery, etc.	553 25
Contingencies	.....
Repairs, ordinary	707 76
Hay and straw	247 15
Coffins and funerals	1,811 76
Total	$57,901 54
Government grant for 1917	$3,448 40

THE BROCKVILLE GENERAL HOSPITAL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	42
Number admitted	811
Births in Hospital	72
Total number under treatment	925
Discharged	844
Died	45
Under treatment, 30th September, 1917	36
	925

Sex.

Male	477
Female	448
	925

Revenue.

From the Province of Ontario	$721 52
From the Town of Brockville	2,000 00
From the Counties of Leeds and Grenville	.....
From other municipalities of the Province	.....
From paying patients	21,624 42
From property belonging to the Hospital	1,376 33
From subscriptions, bequests and donations from private individuals	2,590 02
From other sources not enumerated	.....
Total	$28,312 29

Expenditures.

Butchers' meat	$3,114 01
Butter and eggs	2,065 99
Flour, bread and meal	855 76
Milk	1,013 39
Tea and coffee	382 08
Potatoes and other vegetables	510 32
Groceries and provisions not enumerated	1,845 58
Drugs and medicines	782 87
Medical and surgical appliances	1,013 22
Bedding, napery and general house furnishings	129 16
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	2,241 75
Electric light, gas, oil, candles	909 18
Water supply	.....
Ice supply	36 23
Salaries and wages	6,800 90
Taxes and insurance	393 80
Contingencies	592 78
Repairs, ordinary	1,112 80
Ambulance	234 52
Printing, stationery, etc.	96 35
Laundry expenses	1,093 05
Surgical instruments	983 68
Total	$26,207 42
Government grant for 1917	$883 84

ST. VINCENT DE PAUL HOSPITAL, BROCKVILLE.

The following summaries show the operations of the Hospital during the official year.

Movements of Patients.

Number under treatment, 1st October, 1916	48
Admitted	1,083
Births in Hospital	76
Total number under treatment	1,207
Discharged	1,113
Died	47
Under treatment, 30th September, 1917	47
	1,207

Sex.

Male	484
Female	723
	1,207

Revenue.

From the Province of Ontario	$2,488 57
From the Town of Brockville	2,000 00
From other municipalities	385 00
From paying patients	18,987 76
From subscriptions, bequests and donations from private individuals	1,772 00
From other sources, not enumerated	4,217 49
Total	$29,850 82

Expenditures.

Butchers' meat and fish	$4,376 34
Butter and eggs	2,497 89
Flour, bread and meal	972 90
Milk	2,064 21
Tea and coffee	397 80
Potatoes and other vegetables	871 31
Groceries and provisions not enumerated	2,375 13
Drugs and medicines	615 74
Medical and surgical appliances	662 12
Bedding, napery and general house furnishings	2,499 61
Brooms, brushes, mops, soap and cleaning appliances	992 41
Fuel	3,434 58
Electric light, gas, oil, candles	991 80
Water supply	25 74
Clothing for sisters, including boots and shoes	.....
Ice supply	245 27
Salaries and wages	3,504 00
Taxes, insurance and interest	226 43
Contingencies	555 81
Repairs, ordinary	1,993 27
Printing, stationery, etc.	487 86
Surgical instruments	.....
Beer, wine and spirits	61 85
Total	$29,852 07
Government grant for 1917	$2,393 85

LADY MINTO HOSPITAL, CHAPLEAU.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	4
Admitted	124
Births in Hospital	14
Total number under treatment	142
Discharged	128
Died	5
Under treatment, 30th September, 1917	9
	142

Sex.

Male	89
Female	53
	142

Revenue.

From the Province of Ontario	$348 14
From the Town of Chapleau	.....
From patients themselves for maintenance and treatment.	3,532 94
From subscriptions, donations and bequests from private individuals	2,489 20
From other sources	.....
Total	$6,370 28

LADY MINTO HOSPITAL, CHAPLEAU.—*Continued.*

Expenditures.

Butchers' meat and fish	$239 27
Butter and eggs	.....
Milk	114 00
Tea and coffee	.....
Potatoes and other vegetables	.....
Groceries and provisions not enumerated	952 33
Drugs and medicines	.....
Surgical and medical appliances	34 35
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	.....
Fuel	962 52
Brooms, brushes, mops, soap and cleaning appliances ...	.....
Electric light, gas, oil and power	101 84
Water supply	75 00
Ice	68 50
Salaries and wages	2,466 30
Taxes and insurance, telephone and power	225 00
Stationery, printing, etc.	10 25
Contingencies	3 00
Repairs, ordinary	18 35
Hay and straw	.....
Total	$5,271 71
Government grant for 1917 ..	$371 07

GENERAL HOSPITAL, CHATHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	31
Admitted	745
Births in Hospital	78
Total number under treatment	854
Discharged	763
Died	49
Under treatment, 30th September, 1917	42
	854

Sex.

Male	328
Female	526
	854

Revenue.

From the Province of Ontario	$978 04
From the City of Chatham ..	403 00
From the County of Kent ...	1,441 90
From other municipalities of the Province	.....
From patients themselves for maintenance and treatment	22,562 29
From subscriptions, donations and bequests from private individuals	300 00
From all other sources	55 00
Total	$25,740 23

Expenditures.

Butchers' meat	$1,546 09
Butter and eggs	857 36
Flour, bread and meal	626 29
Milk	1,000 35
Tea and coffee	846 75
Potatoes and other vegetables	251 08
Groceries and provisions not enumerated	3,596 03
Drugs and medicines	737 50
Surgical instruments	619 16
Beer, wine and spirits	14 00
Bedding, napery and general house furnishings	1,503 97
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	1,156 75
Electric light, gas, oil, candles	548 41
Ice	130 50
Salaries and wages	5,803 25
Insurance and interest	156 80
Contingencies	805 49
Repairs, ordinary	766 57
Laundry	4,713 84
Total	$25,680 19
Government grant for 1917 ..	$654 37

ST. JOSEPH'S HOSPITAL, CHATHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	42
Admitted	627
Births in Hospital	91
Total under treatment	760
Discharged	668
Died	53
Under treatment, 30th September, 1917	39
	760

Sex.

Male	298
Female	462
	760

Revenue.

From the Province of Ontario	$643 06
From the City of Chatham	617 75
From the County of Kent	418 50
From patients for maintenance and treatment	16,194 25
From subscriptions, donations and bequests from private individuals	678 50
From other sources	270 00
Total	$18,822 06

Expenditures.

Butchers' meat	$1,783 67
Butter and eggs	1,885 51
Flour, bread and meal	1,308 90
Milk	954 25
Tea and coffee	454 72
Potatoes and other vegetables	512 58
Groceries and provisions not enumerated	2,093 47
Drugs and medicines	544 68
Medical and surgical appliances	554 66
Beer, wine and spirits	36 90
Bedding, napery and general house furnishings	839 07
Brooms, brushes, mops, soap and cleaning appliances	328 74
Fuel	1,229 08
Light: electric, gas, oil, candles	272 58
Ice supply	46 00
Salaries and wages	2,282 46
Taxes, insurance and interest	1,134 05
Contingencies	185 54
Repairs, ordinary	2,066 24
Advertising, printing and postage	108 08
Total	$18,621 18
Government grant for 1917	$653 14

COTTAGE HOSPITAL, COBOURG.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	10
Admitted	236
Births in Hospital	17
Total number under treatment	263
Discharged	232
Died	17
Under treatment, 30th September, 1917	14
	263

Sex.

Male	130
Female	133
	263

Revenue.

From the Province of Ontario	$1,041 41
From the Town of Cobourg	300 00
From the Counties of Northumberland and Durham	720 20
From other municipalities in the Province	250 00
From paying patients themselves	5,982 57
From endowments, investments, etc.	.....
From subscriptions, donations, etc.	925 63
From other sources	115 70
Total	$9,335 51

COTTAGE HOSPITAL, COBOURG.—*Continued.*

Expenditures.

Butchers' meat and fish	$873 71
Butter and eggs	465 62
Flour, bread and meal	306 12
Milk	418 97
Tea and coffee	107 76
Potatoes and other vegetables	109 11
Groceries and provisions not enumerated	379 98
Drugs and medicines	112 51
Medical and surgical appliances	286 84
Bedding, napery and general house furnishings	420 31
Brooms, brushes, mops, soap and cleaning appliances	170 20
Fuel	1,559 10
Water	61 88
Electric light, gas, oil	231 14
Salaries and wages	2,883 81
Contingencies	850 52
Repairs, ordinary	194 37
Printing, stationery, postage, etc.	85 26
Ice	25 00
Insurance	.....
Clothing for patients	25 62
Wine and spirits	.....
Total	$9,567 83
Government grant for 1917	$701 52

LADY MINTO HOSPITAL, COCHRANE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	15
Admitted	196
Births in Hospital	17
Total number under treatment	228
Discharged	199
Died	12
Under treatment, 30th September, 1917	17
	228

Sex.

Male	159
Female	69
	228

Revenue.

From the Province of Ontario.	$230 50
From the Town of Cochrane	.....
From patients themselves for maintenance and treatment.	3,757 53
From property belonging to Hospital, endowments, etc.	.....
From subscriptions, donations, and bequests from private individuals	1,853 66
From other sources	.....
Total	$5,841 69

Expenditures.

Butchers' meat	$290 91
Butter and eggs	88 82
Flour, bread and meal	135 82
Milk	225 06
Tea and coffee	17 60
Potatoes and other vegetables	6 65
Groceries and provisions not enumerated	191 37
Drugs and medicines	237 83
Surgical instruments and appliances	576 37
Beer, wine and spirits	5 85
Bedding, napery and general house furnishings	85 45
Brooms, brushes, mops, soap and cleaning appliances	15 00
Fuel	419 80
Electric light, gas, oil, candles	150 61
Water supply	.....
Clothing for patients	.....
Ice	60 70
Salaries and wages	3,635 00
Taxes and insurance	260 70
Hay and straw	.....
Contingencies	.....
Printing, stationery, etc.	73 27
Repairs, ordinary	70 05
Total	$6,546 86
Government grant for 1917	$588 23

GENERAL AND MARINE HOSPITAL, COLLINGWOOD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	36
Admitted	521
Number of births in the Institution during the year	45
Total number under treatment	602
Discharged	524
Died	45
Under treatment, 30th September, 1917	33
	602

Sex.

Male	266
Female	336
	602

Revenue.

Received from the Province of Ontario	$902 02
From the Town of Collingwood	900 00
From the County of Simcoe.	500 00
From paying patients	14,248 69
Subscriptions, donations, etc..	38 42
From sources not enumerated	.....
Total	$16,589 13

Expenditures.

Butchers' meat	$1,804 89
Butter and eggs	1,284 75
Flour, bread and meal	659 87
Milk	639 87
Tea and coffee	291 68
Potatoes and other vegetables	491 43
Groceries and provisions not enumerated	1,427 61
Drugs and medicines	885 31
Medical and surgical appliances	265 35
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	690 14
Brooms, brushes, mops, etc..	170 40
Fuel	2,047 82
Electric light, gas, oil, candles	185 65
Water supply	89 21
Ice	110 00
Salaries and wages	3,771 82
Contingencies	382 91
Repairs, ordinary	1,379 03
Taxes and insurance	44 25
Total	$16,621 99

Government grant for 1917 .. $1,138 28

GENERAL HOSPITAL, CORNWALL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Total under treatment, 1st October, 1916	43
Admitted	647
Births in Hospital	46
Total number under treatment	736
Discharged	680
Died	31
Under treatment, 30th September, 1917	25
	736

Sex.

Male	363
Female	373
	736

Revenue.

From the Province of Ontario	$999 97
From the Town of Cornwall	675 00
From the Counties of Stormont, Dundas and Glengarry	1,000 00
From other municipalities in the Province	750 00
From paying patients themselves	13,737 40
From subscriptions, donations, etc.	3,574 99
From other sources	801 41
Total	$21,538 77

GENERAL HOSPITAL, CORNWALL.—*Continued.*

Expenditures.

Butchers' meat and fish	$1,346 63
Butter and eggs	1,077 99
Flour, bread and meal	540 71
Milk	664 08
Tea and coffee	178 75
Potatoes and other vegetables	341 22
Groceries and provisions not enumerated	1,310 26
Drugs and medicines	707 41
Medical and surgical appliances	655 45
Surgical instruments	50 41
Beer, wine and spirits	23 50
Bedding, napery and general house furnishings	742 38
Brooms, brushes, mops, soap and cleaning appliances	135 54
Fuel	1,058 12
Electric light, gas, oil, candles	541 36
Salaries and wages	4,224 15
Laundry	1,241 71
Contingencies	100 73
Repairs, ordinary	455 04
Printing, stationery, postage, telephone, etc.	437 24
Ice	25 00
Insurance and interest	145 50
Hay and straw	.....
Clothing for patients	.....
Total	$16,003 18
Government grant for 1917	$975 53

HOTEL DIEU HOSPITAL, CORNWALL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	41
Admitted	943
Births in Hospital	42
Total number under treatment	1,026
Discharged	942
Died	46
Under treatment, 30th September, 1917	38
	1,026

Sex.

Male	544
Female	482
	1,026

Revenue.

From the Province of Ontario	$2,246 51
From the Town of Cornwall	675 00
From the Counties of Stormont, Dundas and Glengarry	1,000 00
From other municipalities in the Province	550 00
From paying patients themselves	8,954 99
From subscriptions, donations, etc.	4,174 00
From other sources	1,597 49
Total	$19,197 99

Expenditures.

Butchers' meat and fish	$2,555 42
Butter and eggs	1,600 07
Flour, bread and meal	730 51
Milk	766 23
Tea and coffee	560 71
Potatoes and other vegetables	577 93
Groceries and provisions not enumerated	2,007 56
Drugs and medicines	648 76
Medical and surgical appliances	1,087 52
Surgical instruments	.....
Beer, wine and spirits	53 25
Bedding, napery and general house furnishings	955 69
Brooms, brushes, mops, soap and cleaning appliances	487 92
Fuel	2,301 83
Electric light, gas, oil and candles	595 67
Ice	195 64
Salaries and wages	1,217 66
Taxes and insurance	202 16
Contingencies	1,505 17
Repairs, ordinary	743 63
Clothing for patients	.....
Hay and straw	182 72
Printing and postage	115 07
Total	$19,091 12
Government grant for 1917	$2,092 15

ROYAL ALEXANDRA HOSPITAL, FERGUS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	16
Admitted	265
Births in Hospital	15
Total under treatment	296
Discharged	247
Died	25
Under treatment, 30th September, 1917	24
	296

Sex.

Male	129
Female	167
	296

Revenue.

From the Province of Ontario	$346 49
From the County of Wellington	1,147 20
From other municipalities	25 00
From patients for maintenance and treatment	12,205 50
From subscriptions, donations and bequests from private individuals	50 00
From all other sources	354 40
Total	$14,128 59

Expenditures.

Butchers' meat	$1,052 15
Butter and eggs	884 46
Flour, bread and meal	584 69
Milk	511 98
Tea and coffee	145 95
Potatoes and other vegetables	992 64
Groceries and provisions not enumerated	621 54
Drugs and medicines	593 77
Medical and surgical appliances	577 73
Surgical instruments	90 63
Bedding, napery and general house furnishings	877 69
Brooms, brushes, mops, soap and cleaning appliances	172 46
Fuel	1,271 69
Electric light, gas, oil, candles	292 04
Ice supply	53 70
Salaries and wages	2,987 15
Water supply	40 92
Contingencies	340 00
Repairs, ordinary	231 09
Hay, straw and feed	10 18
Printing and stationery	193 13
Freight and express	195 47
Taxes and insurance	181 34
Telephone	.....
Total	$12,902 40
Government grant for 1917	$317 70

McKELLAR GENERAL HOSPITAL, FORT WILLIAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	65
Admitted	1,856
Number of births in Hospital	188
Total number under treatment	2,109
Discharged	1,945
Died	100
Under treatment, 30th September, 1917	64
	2,109

Sex.

Male	1,099
Female	1,010
	2,109

Revenue.

From the Province of Ontario	$2,667 46
From the Town of Fort William	9,400 00
From other municipalities	.....
From paying patients	30,131 55
Subscriptions, donations, etc.	489 25
Other sources	35 00
Total	$42,723 26

Expenditures.

Butchers' meat	$2,413 12
Flour, bread and meal	2,866 55
Milk	1,501 10
Butter and eggs	1,827 13
Tea and coffee	487 40
Potatoes and other vegetables	793 33
Groceries and provisions not enumerated	2,977 15
Drugs and medicines	1,318 24

McKELLAR GENERAL HOSPITAL, FORT WILLIAM.—*Continued.*

Medical and surgical appliances	2,251 87
Beer, wine and spirits	106 91
Bedding, napery and general house furnishings	.....
Brooms, brushes, mops, soap and cleaning appliances and laundry	1,621 39
Fuel	6,363 79
Taxes, insurance	149 50
Printing, stationery, etc.	554 65
Salaries and wages	13,755 75
Contingencies	1,034 47
Repairs, ordinary	2,215 43
Interest	44 61
Water supply	526 10
Fish	531 45
Electric light, gas, oil, etc.	624 48
X-ray supplies	359 50
Total	$44,323 92
Government grant for 1917	$2,396 33

GALT HOSPITAL, GALT.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	37
Admitted	742
Number of births in the Institution	101
Total number under treatment	880
Discharged	769
Died	65
Under treatment, 30th September, 1917	46
	880

Sex.

Male	376
Female	504
	880

Revenue.

From the Province of Ontario	$1,199 44
From the Town of Galt	2,875 00
From the County of Waterloo	2,000 00
From other municipalities	100 00
From paying patients themselves	16,187 02
Income from endowments, investments, etc.	488 00
From subscriptions, bequests, and donations of private individuals	151 00
From other sources	.....
Total	$23,000 46

Expenditures.

Butchers' meat	$2,129 65
Butter and eggs	745 34
Flour, bread and meal	758 71
Milk	1,339 83
Tea and coffee	.....
Potatoes and other vegetables	69 95
Groceries and provisions not enumerated	5,084 27
Drugs and medicines	1,349 24
Medical and surgical appliances	1,229 62
Beer, wine and spirits	223 90
Bedding, napery and general house furnishings	170 12
Brooms, brushes, mops, soap and cleaning appliances	542 82
Fuel	2,063 33
Electric light, gas, oil, candles	286 05
Water supply	310 52
Ice	162 48
Salaries and wages	5,989 17
Taxes and insurance	30 75
Contingencies	236 09
Repairs, ordinary	895 50
Printing, stationery, etc.	163 62
Telephone	85 00
Hay and straw	13 23
Total	$23,879 19
Government grant for 1917	$1,186 33

GENERAL AND MARINE HOSPITAL, GODERICH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	2
Admitted	152
Births in Hospital	36
Total number under treatment	190
Discharged	175
Died	13
Under treatment, 30th September, 1917	2
	190

Sex.

Male	72
Female	118
	190

Revenue.

From the Province of Ontario	$322 53
From the Town of Goderich	500 00
From the County of Huron	516 88
From other municipalities	.....
From patients themselves for maintenance and treatment.	3,055 45
From endowments, investments, etc.	126 25
From subscriptions, donations and bequests from private individuals	433 75
From other sources	306 58
Total	$5,261 44

Expenditures.

Butchers' meat	$267 93
Butter and eggs	290 18
Flour, bread and meal	138 15
Milk	126 00
Tea and coffee	36 70
Potatoes and other vegetables	134 92
Groceries and provisions not enumerated	368 80
Drugs and medicines	52 93
Medical and surgical appliances	307 24
Beer, wine and spirits	.....
Surgical instruments	.....
Bedding, napery and general house furnishings	79 68
Brooms, brushes, mops, soap and cleaning appliances	63 64
Fuel	580 18
Electric light, gas, oil, candles	103 75
Water supply	18 00
Salaries and wages	1,832 63
Printing, stationery, etc.	33 95
Insurance	42 55
Ice supply	19 50
Contingencies	217 72
Repairs, ordinary	209 35
Rent	132 00
Note and interest	203 65
Total	$5,259 45

Government grant for 1917 .. $194 81

GENERAL HOSPITAL, GUELPH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	71
Admitted	1,231
Births in Hospital	84
Total number under treatment	1,386
Discharged	1,286
Died	47
Under treatment, 30th September, 1917	53
	1,386

Sex.

Male	609
Female	777
	1,386

Revenue.

Received from the Province of Ontario	$2,951 14
From the City of Guelph	3,795 28
From the County of Wellington	225 40
From other municipalities	.....
From paying patients	33,590 52
Subscriptions, donations, etc.	93 00

GENERAL HOSPITAL, GUELPH.—*Continued.*

From other sources not enumerated	2,903 89
Total	$43,559 23

Expenditures.

Butchers' meat	$4,957 80
Butter and eggs	3,177 49
Flour, bread and meal	1,496 67
Milk	43 10
Tea and coffee	468 95
Potatoes and other vegetables	1,008 70
Groceries and provisions not enumerated	3,311 79
Drugs and medicines, surgical instruments and appliances	3,138 24
Beer, wine and spirits	49 85
Bedding, napery and general house furnishings	1,327 02
Brooms, brushes, mops, etc.	2,601 67
Fuel	7,348 43
Electric light, gas, oil, candles	1,581 86
Water supply	177 53
Hay and straw	903 08
Ice	115 00
Salaries and wages	13,183 42
Taxes, insurance and interest	2,561 50
Repairs, ordinary	2,847 15
Contingencies	4,322 76
Printing, stationery, etc.	397 87
Clothing for patients	25 00
Total	$55,044 88
Government aid for 1917	$2,650 81

ST. JOSEPH'S HOSPITAL, GUELPH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	34
Admitted	712
Births in Hospital	49
Total number under treatment	795
Discharged	722
Died	28
Under treatment, 30th September, 1917	45
	795

Sex.

Male	291
Female	504
	795

Revenue.

From the Province of Ontario	$2,208 82
From the City of Guelph	2,430 00
From the County of Wellington	1,657 60
From other municipalities of the Province	.....
From paying patients	12,389 45
Subscriptions, donations, etc.	276 05
Other sources	494 23
Total	$19,456 15

Expenditures.

Butchers' meat and fish	$2,710 25
Butter and eggs	1,243 35
Flour, bread and meal	1,346 77
Milk	.....
Tea and coffee	528 28
Potatoes and other vegetables	.....
Groceries and provisions not enumerated	2,966 94
Drugs and medicines	857 39
Medical and surgical appliances	466 08
Surgical instruments	90 24
Beer, wine and spirits	.....
Bedding, napery and general furnishings	1,145 26
Brooms, brushes, mops, soap and cleaning appliances	513 21
Fuel	2,715 31
Electric light, gas, oil, candles	580 07
Water supply	55 00
Salaries and wages	1,823 40
Taxes, interest and insurance	175 50
Contingencies	826 56
Repairs, ordinary	690 34
Ice supply	.....
Telephone	158 00
Printing, stationery, etc.	142 73
Total	$19,034 68
Government aid for 1917	$1,592 79

CITY HOSPITAL, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	310
Admitted	6,496
Births in Hospital	385
Total number under treatment	7,191
Discharged	6,525
Died	414
Under treatment, 30th September, 1917	252
	7,191

Sex.

Male	3,538
Female	3,653
	7,191

Revenue.

From the Province of Ontario	$15,209 41
From the City of Hamilton	91,485 98
From the County of Wentworth	.....
From patients for maintenance and treatment	87,950 02
From other sources	.....
Total	$194,645 41

Expenditures.

Butchers' meat	$15,826 08
Butter and eggs	13,956 52
Flour, bread and meal	4,056 56
Milk	8,409 50
Tea and coffee	1,999 36
Potatoes and other vegetables	3,059 51
Groceries and provisions not enumerated	14,781 91
Drugs and medicines	5,201 49
Medical and surgical appliances	8,330 98
Laboratory	1,597 79
Beer, wine and spirits	333 45
Bedding, napery and general house furnishings	17,644 17
Brooms, brushes, mops, soap and cleaning appliances	2,789 72
Fuel	19,592 64
Electric light, gas, oil and candles	3,526 83
Water supply	2,856 16
Ice supply	12 00
Salaries and wages	62,066 81
Insurance and taxes	314 60
Contingencies	1,506 95
Repairs, ordinary	2,613 58
Clothing for patients	180 00
X-ray	2,647 76
Merchandise, printing and postage	1,715 85
Telephones and telegraphs	638 40
Hardware and paints	921 93
Night watchmen, services	486 78
Total	$197,067 33
Government grant for 1917	$15,690 14

ST. JOSEPH'S HOSPITAL, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	65
Admitted	1,888
Number of births	187
Total number under treatment	2,140
Discharged	1,965
Died	92
Under treatment, 30th September, 1917	83
	2,140

Sex.

Male	812
Female	1,328
	2,140

Revenue.

From the Province of Ontario	$2,800 24
From the City of Hamilton	1,910 65
Income from endowments, investments, etc.	585 00
From paying patients themselves	31,489 79
Subscriptions, donations and bequests in cash	.....
From all other sources	1,142 50
Total	$37,928 18

Expenditures.

Butchers' meat and fish	$3,980 93
Butter and eggs	2,560 35
Flour, bread and meal	1,248 02
Milk	2,213 84
Tea and coffee	121 41

ST. JOSEPH'S HOSPITAL, HAMILTON.—*Continued.*

Potatoes and other vegetables	1,146 79
Groceries and other provisions not enumerated	3,217 94
Drugs and medicines	1,913 55
Medical and surgical appliances	995 49
Surgical instruments	355 76
Beer, wine and spirits	.....
Bedding, etc.	3,787 27
Brooms, brushes, mops, soap and cleaning appliances	479 86
Fuel	3,139 00
Electric light, gas, oil and candles	1,227 23
Water supply	260 46
Clothing for patients, including boots and shoes	624 76
Ice supply	909 49
Salaries and wages	4,492 68
Taxes, insurance and interest	1,297 04
Contingencies	708 57
Repairs, ordinary	3,084 27
Printing, stationery, etc.	343 07
Coffins and funerals	.....
Total	$38,107 78
Government grant for 1917	$3,103 68

PROVIDENCE HOSPITAL, HAILEYBURY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	43
Admitted	747
Births in Hospital	16
Total number under treatment	806
Discharged	743
Died	30
Under treatment, 30th September, 1917	33
	806

Sex.

Male	410
Female	396
	806

Revenue.

From Government of Ontario	$1,878 19
From Town of Haileybury	500 00
From patients for maintenance and treatment	16,250 50
From other municipalities	512 70
From subscriptions, bequests and donations of private individuals	198 30
From other sources	3,721 00
Income from endowments, etc.	571 65
Total	23,632 34

Expenditures.

Butchers' meat	$2,472 65
Butter and eggs	2,066 00
Flour, bread and meal	563 45
Milk	1,072 80
Tea and coffee	337 00
Potatoes and other vegetables	1,211 67
Groceries and provisions not enumerated	1,292 00
Drugs, medicines	1,188 53
Medical and surgical appliances and surgical instruments	1,226 49
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	644 25
Brooms, brushes, etc.	262 40
Fuel	1,930 00
Electric light, gas, oil, candles	202 40
Water supply	425 44
Printing, stationery, etc.	125 45
Hay and straw	425 44
Ice	150 00
Salaries and wages	2,735 75
Taxes and insurance	425 00
Repairs, ordinary	685 20
Contingencies	1,090 50
Clothing for patients	776 00
Surgical instruments	328 20
Total	$21,636 62
Government grant for 1917	$2,448 96

GENERAL HOSPITAL, INGERSOLL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	13
Admitted	148
Births in Hospital	39
Total number under treatment	200
Discharged	168
Died	17
Under treatment, 30th September, 1917	15
	200

Sex.

Male	70
Female	130
	200

Revenue.

From the Province	$488 52
From the Town of Ingersoll	1,000 00
From the County of Oxford	500 00
From patients themselves for maintenance and treatment	4,624 65
From subscriptions, donations, and bequests from private individuals	10,644 17
From other sources	125 00
Total	$17,382 34

Expenditures.

Butchers' meat	$630 76
Butter and eggs	287 92
Bread	165 10
Milk	238 40
Tea and coffee	.....
Potatoes and other vegetables	76 35
Groceries and provisions not enumerated	763 92
Drugs and medicines	592 51
Medical and surgical appliances	.....
Bedding, napery and general house furnishings	65 95
Brooms, brushes, mops, soap and cleaning appliances	7 50
Fuel	931 91
Electric light, gas, oil, candles	128 39
Salaries and wages	1,973 44
Insurance and taxes	18 00
Contingencies	120 31
Repairs, ordinary and additions	11,914 96
Ice	60 00
Water	65 27
Advertising and printing	70 67
Beer, wine and spirits	7 88
Power for elevator	54 00
Total	$18,173 24
Government grant for 1917	$567 51

GENERAL HOSPITAL, KENORA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	14
Admitted	215
Number of births in Hospital	26
Total number under treatment	255
Discharged	223
Died	15
Under treatment, 30th September, 1917	17
	255

Sex.

Male	163
Female	92
	255

Revenue.

From the Province of Ontario	$290 50
From the Town of Kenora	2,000 00
From other municipalities	.....
From paying patients	5,276 40
Subscriptions, donations, etc.	205 00
Care of lumber and railway camp cases	.....
From other sources	.....
Total	$7,771 90

Expenditures.

Potatoes and other vegetables	$101 80
Butchers' meat and fish	883 16
Butter and eggs	200 85
Bread	363 79
Milk	366 35
Groceries and provisions not enumerated, flour and meal	893 13

GENERAL HOSPITAL, KENORA.—*Continued.*

Drugs and medicines and surgical appliances	486 01
Surgical instruments	.....
Beer, wine and spirits	8 15
Bedding, napery and general house furnishings	35 40
Fuel	1,445 50
Electric light, gas, oil and candles and water	51 85
Ice	64 50
Salaries and wages	2,765 78
Contingencies	124 10
Repairs, ordinary	270 26
Insurance	49 00
Stationery, postage, etc.	45 76
Hay and straw	29 00
Clothing for patients	.....
Brooms, mops, etc.	.....
Total	$8,184 39
Government aid for 1917	$389 08

ST. JOSEPH'S HOSPITAL, KENORA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	16
Admitted	137
Births in Hospital	7
Total number under treatment	160
Discharged	135
Died	12
Under treatment, 30th September, 1917	13
	160

Sex.

Male	75
Female	85
	160

Revenue.

From the Province of Ontario	$556 85
From the Town of Kenora	930 50
From Dominion Government.	163 50
From patients themselves for maintenance and treatment.	3,068 70
From subscriptions, donations and bequests of private individuals	2,388 44
From other sources	797 40
Total	$7,905 39

Expenditures.

Butchers' meat and fish	$447 30
Butter and eggs	360 72
Flour, bread and meal	200 45
Milk	210 00
Tea and coffee	85 00
Potatoes and other vegetables	230 74
Groceries and provisions not enumerated	328 65
Drugs and medicines	176 00
Surgical instruments	41 66
Medical and surgical appliances	201 25
Beer, wine and spirits and mineral water	16 41
Bedding, napery and general house furnishings	100 34
Brooms, brushes, mops, soap and cleaning appliances	164 00
Fuel	578 95
Electric light, gas, oil and candles	100 30
Clothing for patients	125 00
Ice	42 87
Salaries and wages	1,001 14
Insurance	125 85
Contingencies	182 92
Repairs, ordinary	2,600 00
Hay and straw	535 15
Printing, stationery, etc.	41 55
Coffins and funerals	.....
Total	$7,896 25
Government grant for 1917	$767 83

GENERAL HOSPITAL, KINCARDINE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	4
Admitted	110
Births in Hospital	18
Total number under treatment	132
Discharged	119
Died	8
Under treatment, 30th September, 1917	5
	132

GENERAL HOSPITAL, KINCARDINE.—*Continued.*

Sex.

Male	50
Female	82
	132

Revenue.

From the Province of Ontario	$190 66
From the Town of Kincardine	.....
From patients for maintenance and treatment	3,020 04
From subscriptions, donations, and bequests from private individuals	109 00
From other sources	150 00
From County of Bruce	1,500 00
Total	$4,969 70

Expenditure.

Butchers' meat	$286 76
Butter and eggs	220 91
Flour, bread and meal	159 56
Milk	27 21
Tea and coffee	36 40
Potatoes and other vegetables	59 29
Groceries and provisions not enumerated	188 18
Drugs and medicines	181 05
Medical and surgical appliances	138 37
Bedding, napery and general house furnishings	211 84
Brooms, brushes, mops, soap and cleaning appliances	56 86
Fuel	886 55
Electric light, gas, oil, candles	83 75
Beer, wine and spirits	.....
Ice supply	20 00
Salaries and wages	1,753 20
Contingencies	322 84
Repairs, ordinary	217 55
Hay and straw	142 14
Printing and postage	.....
Taxes and insurance	20 00
Total	$5,012 46
Government grant for 1917	$332 37

GENERAL HOSPITAL, KINGSTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	89
Admitted	2,918
Births in Hospital	129
Total number under treatment	3,136
Discharged	2,906
Died	101
Under treatment, 30th September, 1917	129
	3,136

Sex.

Male	1,623
Female	1,513
	3,136

Revenue.

From the Province of Ontario	$3,130 83
From the City of Kingston	10,000 00
From the County of Frontenac	2,300 00
From other municipalities in the Province	940 00
From paying patients themselves for treatment	52,113 34
Subscriptions, donations and bequests	4,390 77
From all other sources not enumerated	2,438 80
Total	$75,313 74

Expenditures.

Butchers' meat	$7,209 70
Butter and eggs	6,968 70
Flour, bread and meal	2,220 47
Milk	4,022 82
Tea and coffee	1,233 80
Potatoes and other vegetables	2,343 15
Groceries and provisions not enumerated	8,404 86
Drugs and medicines	2,824 41
Surgical instruments and appliances	3,448 98
Beer, wine and spirits	498 53
Bedding, napery and general house furnishings	1,704 98
Brooms, brushes, mops, soap and cleaning appliances	1,052 01
Fuel	6,181 50
Electric light, gas, oil and candles	3,484 15
Water supply	571 59
Ice	237 50
Salaries and wages	14,037 55
Insurance and taxes	387 35
Contingencies	5,711 55
Repairs, ordinary	1,648 70
Printing, stationery, etc.	778 09
Clothing for patients	38 85
Total	$75,009 24
Government grant for 1917	$3,657 78

HOTEL DIEU HOSPITAL, KINGSTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	91
Admitted	1,710
Births in Hospital	95
Total number under treatment	1,896
Discharged	1,743
Died	70
Under treatment, 30th September, 1917	83
	1,896

Sex.

Male	812
Female	1,084
	1,896

Revenue.

From the Province of Ontario	$4,155 00
From the City of Kingston	3,600 00
From the County of Frontenac	1,550 00
From other municipalities	266 85
From patients themselves for maintenance and treatment.	26,452 73
Subscriptions, donations and bequests	4,198 25
From other sources not enumerated	4,429 38
Total	$44,643 21

Expenditures.

Butchers' meat	$4,891 11
Butter and eggs	4,305 66
Flour, bread and meal	1,741 37
Milk	3,236 50
Tea and coffee	838 28
Potatoes and other vegetables	1,293 42
Groceries and provisions not enumerated	4,186 40
Drugs and medicines	2,025 04
Medical and surgical appliances	1,992 06
Surgical instruments	55 00
Beer, wine and spirits	262 20
Bedding, napery and general house furnishings	4,169 98
Brooms, brushes, mops, soap and cleaning appliances	600 42
Fuel	3,632 68
Light: gas, oil and candles	2,351 03
Water supply	546 79
Ice	213 00
Salaries and wages	3,864 57
Taxes and insurance	527 48
Hay and straw	155 83
Contingencies	683 27
Repairs, ordinary	2,494 36
Printing, stationery, etc.	350 00
Clothing for patients	7 00
Total	$44,423 45
Government grant for 1917	$4,083 18

KITCHENER AND WATERLOO HOSPITAL, KITCHENER.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	35
Admitted	968
Births in Hospital	91
Total number under treatment	1,094
Discharged	996
Died	59
Under treatment, 30th September, 1917	39
	1,094

Sex.

Male	492
Female	602
	1,094

Revenue.

From the Province of Ontario	$964 44
From the Town of Kitchener.	4,500 00
From the County of Waterloo	2,000 00
From the Town of Waterloo	800 00
From patients for maintenance and treatment	18,751 19
From subscriptions, donations and bequests from private individuals	1,067 73
From other sources	54 90
Total	$28,138 26

Expenditures.

Butchers' meat	$1,752 13
Butter and eggs	1,042 72
Flour, bread and meal	716 00
Milk	1,313 31
Tea and coffee	.....

KITCHENER AND WATERLOO HOSPITAL, KITCHENER.—*Continued.*

Potatoes and other vegetables	281 03	Electric light, gas, oil and candles	768 83
Groceries and provisions not enumerated	2,433 38	Ice supply	108 00
Drugs and medicines	1,653 35	Salaries and wages	7,149 75
Medical and surgical appliances	807 11	Insurance and taxes	7 00
Beer, wine and spirits	307 66	Contingencies	1,605 94
Bedding, napery and general house furnishings	.....	Repairs, ordinary	534 89
Brooms, brushes, mops, soap and cleaning appliances	498 92	Water supply	48 38
Fuel	5,847 88	Total	$26,876 28
		Government grant for 1917	$1,116 21

GENERAL HOSPITAL, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	208
Admitted	3,255
Births in Hospital	264
Total number under treatment	3,727
Discharged	3,322
Died	223
Under treatment, 30th September, 1917	182
	3,727

Sex.

Male	1,537
Female	2,190
	3,727

Revenue.

From the Province of Ontario	$8,478 31
From the City of London	$9,502 83
From the County of Middlesex, in payment of patients	1,500 00
From paying patients themselves	61,894 44
From income from property or investments	529 45
Subscriptions, donations and bequests	5,316 83
	$167,221 86

Expenditures.

Butchers' meat	$17,516 13
Butter and eggs	13,234 50
Flour, bread and meal	3,866 28
Milk	6,953 11
Tea and coffee	1,384 08
Potatoes and other vegetables	3,777 32
Groceries and provisions not enumerated	11,652 90
Drugs and medicines	8,081 87
Surgical instruments	7,897 11
Medical and surgical appliances	1,335 59
Beer, wine and spirits	273 38
Bedding, napery and general house furnishings	6,810 88
Brooms, brushes, mops, soap and cleaning appliances	1,169 97
Fuel	23,034 43
Light: gas, oil and candles	3,189 79
Water	392 01
Ice	927 20
Salaries and wages	42,286 33
Insurance	749 30
Contingencies	3,847 54
Repairs, ordinary	6,861 75
Printing and stationery	1,013 42
Laundry	7,337 50
Total	$173,592 39
Government grant for 1917	$7,981 10

ST. JOSEPH'S HOSPITAL, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	91
Admitted	1,533
Births in Hospital	133
Total number under treatment	1,757
Discharged	1,592
Died	75
Under treatment, 30th September, 1917	90
	1,757

ST. JOSEPH'S HOSPITAL, LONDON.—*Continued.*

Sex.

Male	611
Female	1,146
	1,757

Revenue.

From the Province of Ontario	$1,689 50
From other municipalities	750 00
From paying patients	53,401 15
Subscriptions, donations, etc.	.....
Other sources	.....
Total	$55,840 65

Expenditures.

Butchers' meat	$5,761 03
Butter and eggs	5,010 58
Flour, bread and meal	2,038 71
Milk	3,790 18
Tea and coffee	725 61
Potatoes and other vegetables	1,059 99
Groceries and provisions not enumerated	3,806 81
Drugs and medicines	2,252 74
Medical and surgical appliances	2,158 19
Beer, wine and spirits	222 70
Bedding, napery and general house furnishings	2,834 54
Brooms, brushes, mops, soap and cleaning appliances	1,334 17
Fuel	6,411 57
Light: Gas, oil and candles	1,265 50
Water	301 73
Telephone	.....
Ice	268 70
Salaries and wages	7,811 05
Insurance, taxes and interest	5,362 82
Contingencies	1,614 84
Repairs, ordinary	1,553 71
Printing, stationery, postage, etc.	189 55
Total	$55,774 72
Government grant for 1917	$1,340 22

THE ROSS MEMORIAL HOSPITAL, LINDSAY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	19
Admitted	523
Births in Hospital	26
Total number under treatment	568
Discharged	521
Died	31
Under treatment, 30th September, 1917	16
	568

Sex.

Male	321
Female	247
	568

Revenue.

From the Province of Ontario	$752 69
From the Town of Lindsay	600 00
From the County of Victoria	1,100 00
From other municipalities	.....
From patients themselves for maintenance and treatment	8,868 37
Income from endowments	2,655 88
Subscriptions, donations and bequests of private individuals	86 09
From other sources not enumerated	1,271 34
Total	$15,334 37

Expenditures.

Butchers' meat	$1,234 68
Butter and eggs	1,135 07
Flour, bread and meal	401 84
Milk	664 80
Tea and coffee	160 39
Potatoes and other vegetables	475 12
Groceries and provisions not enumerated	880 15
Drugs and medicines	652 45
Medical and surgical appliances	458 43
Surgical instruments	42 08
Beer, wine and spirits	26 96
Bedding, napery and general house furnishings	445 34
Brooms, brushes, mops, soap and cleaning appliances	292 90
Fuel	495 36
Electric light, gas, oil and candles	103 86
Water supply	85 00
Clothing for patients, including boots and shoes	5 00
Ice	100 00
Salaries and wages	4,412 75
Contingencies	808 44
Repairs, ordinary	833 39
Taxes and insurance	82 01
Stationery, postage, etc.	127 63
Total	$13,923 65
Government grant for 1917	$775 98

GENERAL HOSPITAL, MATTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	24
Admitted	234
Total number under treatment	258
Discharged	224
Died	10
Under treatment, 30th September, 1917	24
	258

Sex.

Male	142
Female	116
	258

Revenue.

From the Province of Ontario	$1,524 89
From Town of Mattawa	50 00
From patients for maintenance and treatment	3,161 11
From subscriptions, bequests and donations of private individuals	1,713 95
From other sources	320 00
Total	$6,769 95

Expenditures.

Butchers' meat	$718 00
Butter and eggs	298 00
Flour, bread and meal	287 48
Milk	304 25
Tea and coffee	295 98
Potatoes and other vegetables	195 59
Groceries and provisions not enumerated	259 00
Drugs and medicines	208 25
Medical and surgical appliances	312 75
Beer, wine and spirits	50 90
Surgical instruments	34 56
Bedding, napery and general house furnishings	368 29
Brooms, brushes, etc.	66 35
Fuel	375 75
Electric light, gas, oil, candles	190 00
Water supply	149 80
Printing, stationery, etc.	159 75
Hay and straw	109 00
Ice	39 70
Salaries and wages	1,520 00
Taxes and insurance	165 00
Repairs, ordinary	212 00
Contingencies	132 00
Clothing for patients	198 45
Coffins and funerals	54 48
Total	$6,705 3[illegible]
Government grant for 1917	$1,988 32

GENERAL HOSPITAL, MIDLAND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	9
Admitted	265
Births in Hospital	31
Total number under treatment	305
Discharged	278
Died	19
Under treatment, 30th September, 1917	8
	305

Sex.

Male	165
Female	140
	305

Revenue.

From the Province of Ontario	$322 13
From the Town of Midland..	450 00
From the County of Simcoe..	500 00
From other municipalities ..	75 00
From patients themselves for maintenance and treatment.	5,974 53
From subscriptions, donations and bequests from private individuals	217 31
From other sources	27 72
Total	$7,566 69

Expenditures.

Butchers' meat	$309 55
Butter and eggs	284 53
Flour, bread and meal	250 63
Milk	128 93
Tea and coffee	44 37

GENERAL HOSPITAL, MIDLAND.—*Continued.*

Potatoes and other vegetables	121 36	Water supply	21 70
Groceries and provisions not enumerated	428 95	Ice	52 50
Drugs and medicines	211 84	Salaries and wages	1,996 75
Surgical instruments and appliances	528 47	Printing, stationery, etc.	45 12
Beer, wine and spirits	2 60	Contingencies	236 02
Bedding, napery and general house furnishings	86 86	Repairs, ordinary	583 06
Brooms, brushes, mops, soap and cleaning appliances	28 54	Taxes and insurance	41 25
Fuel	489 88	Laundry	497 78
Light: electric, gas, oil and candles	57 58	Hay and straw	71 08
		Total	$6,519 35
		Government grant for 1917	$531 79

LADY MINTO HOSPITAL, NEW LISKEARD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	8
Admitted	141
Births in Hospital	13
Total number under treatment	162
Discharged	140
Died	14
Under treatment, 30th September, 1917	8
	162

Sex.

Male	81
Female	81
	162

Revenue.

From the Province of Ontario	$503 56
From the Town of New Liskeard	100 00
From other municipalities	100 00
From Victorian Order	400 00
From patients for maintenance and treatment	5,798 53
From subscriptions, donations and bequests from private individuals	821 26
From other sources	.....
Total	$7,723 35

Expenditures.

Butchers' meat	$351 38
Butter and eggs	238 56
Flour, bread and meal	173 23
Milk	214 50
Tea and coffee	56 70
Potatoes and other vegetables	168 75
Groceries and provisions not enumerated	298 56
Drugs and medicines	142 77
Medical and surgical appliances	.....
Beer, wine and spirits	100 00
Bedding, napery and general house furnishings	71 71
Brooms, brushes, mops, soap and cleaning appliances	33 61
Fuel	475 38
Electric light, gas, oil and power	60 86
Ice supply	34 55
Salaries and wages	2,263 45
Repairs, ordinary	112 53
Laundry	11 84
Printing, stationery, etc.	133 79
Taxes and insurance	.....
Contingencies	.....
Nurses' Home Fund	1,040 28
Total	$5,982 45
Government grant for 1917	$590 55

GENERAL HOSPITAL, NIAGARA FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	27
Admitted	441
Births in Hospital	54
Total under treatment	522
Discharged	473
Died	22
Under treatment, 30th September, 1917	27
	522

Sex.

Male	250
Female	272
	522

Revenue.

From the Province of Ontario	$1,228 49
From the Town of Niagara Falls	1,500 00
From the County of Welland.	.....
From other municipalities	300 00
From patients for maintenance and treatment	12,449 87
From subscriptions, donations, and bequests from private individuals	1,524 37
From other sources	552 64
Total	$17,555 37

Expenditures.

Butchers' meat	$738 47
Butter and eggs	1,217 30
Flour, bread and meal	426 02
Milk	602 68
Tea and coffee	138 45
Potatoes and other vegetables	204 71
Groceries and provisions not enumerated	1,985 34
Drugs and medicines	1,667 38
Medical and surgical appliances	826 17
Surgical instruments	.....
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	249 01
Brooms, brushes, mops, soap and cleaning appliances	107 68
Fuel	875 07
Electric light, gas, oil, candles	169 57
Ice supply	154 60
Salaries and wages	4,051 33
Contingencies	1,876 69
Repairs, ordinary	1,032 65
Taxes and insurance	409 19
Water supply	47 72
Printing and postage	125 34
Total	$16,905 37
Government grant for 1917	$978 13

QUEEN VICTORIA MEMORIAL HOSPITAL, NORTH BAY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	11
Admitted	350
Births in Hospital	57
Total number under treatment	418
Discharged	387
Died	20
Under treatment, 30th September, 1917	11
	418

Sex.

Male	221
Female	197
	418

Revenue.

From the Province of Ontario	$763 03
From the Town of North Bay	1,500 00
From other municipalities	.....
From patients themselves for maintenance and treatment	8,074 88
Subscriptions, donations, etc.	2,129 89
Total	$12,467 80

Expenditures.

Butchers' meat	$1,002 36
Butter and eggs	732 11
Flour, bread and meal	441 57
Milk	477 96
Tea and coffee	122 95
Potatoes and other vegetables	417 26
Groceries and provisions not enumerated	988 53
Drugs and medicines	173 65

QUEEN VICTORIA MEMORIAL HOSPITAL, NORTH BAY.—*Continued.*

Surgical instruments and appliances	538 64
Bedding, napery and general house furnishings	102 21
Brooms, brushes, mops, soap and cleaning appliances	98 04
Fuel	1,600 87
Electric light, gas, oil, candles	117 68
Water supply	30 00
Ice	63 25
Salaries and wages	3,385 60
Contingencies	1,062 45
Repairs, ordinary	208 14
Beer, wine and spirits	.....
Taxes and insurance	56 70
Printing and postage	222 02
Surgical instruments	67 87
Total	$11,909 86
Government grant for 1917	$495 17

GENERAL HOSPITAL, ORANGEVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	6
Admitted	123
Births in Hospital	14
Total number under treatment	143
Discharged	129
Died	5
Under treatment, 30th September, 1917	9
	143

Sex.

Male	61
Female	82
	143

Revenue.

From the Province of Ontario	$314 98
From the Town of Orangeville	.....
From the County of Dufferin	.....
From other municipalities	.....
From patients for maintenance and treatment	4,960 20
From endowments, investments, etc.	.....
From subscriptions, donations, and bequests from private individuals	140 00
From other sources	.....
Total	$5,415 18

Expenditures.

Butchers' meat	$312 16
Butter and eggs	373 31
Flour, bread and meal	173 81
Milk	262 60
Tea and coffee	70 00
Potatoes and other vegetables	38 10
Groceries and provisions not enumerated	738 06
Drugs and medicines	686 93
Medical and surgical appliances	.....
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	.....
Brooms, brushes, mops, soap and cleaning appliances	23 00
Fuel	350 00
Light: Gas, oil and candles	89 20
Water	.....
Ice supply	14 00
Salaries and wages	1,323 00
Laundry	240 25
Contingencies	.....
Repairs, ordinary	215 55
Printing, stationery and postage	17 60
Taxes and insurance	.....
Telephone	36 00
Total	$5,100 57
Government grant for 1917	$400 47

GENERAL HOSPITAL, ORILLIA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	12
Admitted	547
Births in Hospital	51
Total number under treatment	610
Discharged	569
Died	24
Under treatment, 30th September, 1917	17
	610

Sex.

Male	292
Female	318
	610

Revenue.

From the Province of Ontario	$1,289 32
From the Town of Orillia	.....
From the County of Simcoe	500 00
From patients themselves for maintenance and treatment.	9,337 57
From subscriptions, donations and bequests from private individuals	66 00
From other sources	3 65
Total	$11,196 54

Expenditures.

Butchers' meat	$540 11
Butter and eggs	643 77
Flour, bread and meal	403 70
Milk	577 74
Groceries and provisions not enumerated	1,128 62
Drugs and medicines	267 51
Medical and surgical appliances	591 81
Bedding, napery and general house furnishings	754 98
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	1,120 39
Electric light, gas, oil and candles	172 16
Water supply	59 95
Beer, wine and spirits	10 00
Salaries and wages	3,511 48
Taxes and insurance	110 00
Contingencies	1,535 31
Repairs, ordinary	1,070 49
Printing, stationery, etc.	399 36
Total	$12,897 38

Government grant for 1917 .. $1,592 40

GENERAL HOSPITAL, OSHAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	30
Admitted	455
Number of births in Hospital	38
Total number under treatment	523
Discharged	462
Died	39
Under treatment, 30th September, 1917	22
	523

Sex.

Male	254
Female	269
	523

Revenue.

From the Province of Ontario	$1,465 31
From the Town of Oshawa	600 00
From the County of Ontario.	600 00
From paying patients	11,164 77
Subscriptions, donations, etc..	998 40
From all other sources	470 57
Total	$15,299 05

Expenditures.

Butchers' meat and fish	$843 95
Butter and eggs	603 68
Flour, bread and meal	400 74
Milk	534 56
Tea and coffee	99 35
Potatoes and other vegetables	152 90
Groceries and provisions not enumerated	1,003 66
Drugs and medicines	535 72

GENERAL HOSPITAL, OSHAWA.—*Continued.*

Medical and surgical appliances	767 07
Beer, wine and spirits	63 60
Bedding, napery and general house furnishings	20 78
Brooms, brushes, mops, soap and cleaning appliances	320 78
Fuel	1,420 15
Electric light, gas, oil, candles	457 95
Water supply	85 68
Ice	.....
Salaries and wages	4,687 55
Contingencies	523 74
Repairs, ordinary	542 80
Surgical instruments	63 60
Printing, stationery and postage	66 89
Taxes and insurance	.....
Total	$13,195 15
Government aid for 1917	$1,251 57

GENERAL PROTESTANT HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	117
Admitted	2,683
Births in the Hospital	.....
Total number under treatment	2,800
Discharged	2,558
Died	122
Under treatment, 30th September, 1917	120
	2,800

Sex.

Male	1,443
Female	1,357
	2,800

Revenue.

From the Province of Ontario	$3,627 58
From the City of Ottawa	13,960 80
From the County of Carleton.	1,500 00
From other municipalities	675 00
From patients themselves for maintenance and treatment	66,793 29
Income from endowments, investments, etc.	.....
Subscriptions, donations and bequests of private individuals	5,039 94
From other sources not enumerated	382 00
Total	$91,978 61

Expenditures.

Butchers' meat	$7,003 37
Butter and eggs	5,403 26
Flour, bread and meal	2,669 02
Milk	4,568 53
Tea and coffee	848 12
Potatoes and other vegetables	1,648 89
Groceries and provisions not enumerated	5,944 81
Drugs and medicines	4,305 12
Medical and surgical appliances	5,156 24
Surgical instruments	749 85
Beer, wine and spirits	197 88
Bedding, napery and general house furnishings	3,983 16
Brooms, brushes, mops, soap and cleaning appliances	1,813 13
Fuel	6,720 48
Electric light, gas, oil, candles	926 93
Water supply	687 30
Clothing for patients, including boots and shoes	275 16
Ice	257 00
Salaries and wages	25,216 09
Taxes and insurance	173 58
Contingencies	2,484 97
Repairs, ordinary	8,721 11
Interest	1,051 70
Printing, stationery, etc.	1,314 58
Total	$92,120 28
Government grant for 1917	$3,335 29

ROMAN CATHOLIC HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	144
Admitted	2,977
Births in Hospital	4
Total number under treatment	3,125
Discharged	2,876
Died	125
Under treatment, 30th September, 1917	124
	3,125

Sex.

Male	1,569
Female	1,556
	3,125

Revenue.

From the Province of Ontario	$5,558 48
From the City of Ottawa	20,814 15
From the County of Carleton	300 00
From other municipalities	515 00
From patients themselves for maintenance and treatment	51,474 27
Income from property	1,202 70
Subscriptions, donations and bequests of private individuals	869 44
From all other sources not enumerated	3,761 60
Total	$84,495 64

Expenditures.

Butchers' meat	$5,418 83
Butter and eggs	4,293 83
Flour, bread and meal	2,997 73
Milk	413 75
Tea and coffee	1,445 71
Potatoes and other vegetables	2,135 55
Groceries and provisions not enumerated	7,158 38
Drugs and medicines	3,985 29
Medical and surgical appliances	2,805 67
Surgical instruments	463 47
Beer, wine and spirits	417 94
Bedding, napery and general house furnishings	3,963 96
Brooms, brushes, mops, soap and cleaning appliances	1,484 95
Fuel	6,849 67
Electric light, gas, oil, candles	2,589 23
Water supply	797 78
Clothing for patients, including boots and shoes	3,155 53
Ice	408 00
Salaries and wages	15,392 94
Taxes and insurance	2,826 72
Contingencies	464 81
Repairs, ordinary	5,626 25
Printing, stationery, etc.	1,447 22
Telephones	420 46
Radiographic Dept.	2,601 36
Total	$79.565 03
Government grant for 1917	$5,490 97

MATERNITY HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	34
Admitted	560
Number of births	535
Total number under treatment	1,129
Discharged	1,077
Died	14
Under treatment, 30th September, 1917	38
	1,129

Sex.

Male	285
Female	844
	1,129

Revenue.

From the Province of Ontario	$502 80
From the City of Ottawa	1,600 00
From the County of Carleton.	75 00
From paying patients themselves	15,363 81
From subscriptions and donations	1,610 57
From other sources	.....
Total	$19,152 18

MATERNITY HOSPITAL, OTTAWA.—*Continued.*

Expenditures.

Butchers' meat	$1,581 63
Butter and eggs	1,260 18
Flour, bread and meal	415 02
Milk	635 97
Tea and coffee	170 80
Potatoes and other vegetables	637 50
Groceries and provisions not enumerated	532 61
Drugs and medicines	592 55
Medical and surgical appliances	86 68
Surgical dressings	987 02
Bedding, napery and general house furnishings	183 26
Brooms, brushes, mops, soaps and cleaning appliances	160 83
Fuel	913 94
Gas, oil, candles and electric light	501 19
Water supply	131 92
Beer, wine and spirits	.....
Ice	127 83
Salaries and wages	5,379 05
Stationery, printing, etc.	220 98
Contingencies	3,395 17
Repairs, ordinary	394 00
Taxes and insurance	5 15
Laundry	560 27
Total	$18,873 55
Government grant for 1917	$456 30

[redacted]

MISERICORDIA MATERNITY HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	125
Admitted	293
Births in Hospital	161
Total number under treatment	579
Discharged	350
Died	95
Under treatment, 30th September, 1917	134
	579

Sex.

Male	179
Female	400
	579

Revenue.

From the Province of Ontario	$2,601 95
From the City of Ottawa	2,500 00
From the County of Carleton.	50 00
From patients themselves for maintenance and treatment.	2,506 19
Subscriptions, donations and bequests	4,754 71
From other sources not enumerated	7,093 60
Total	$19,506 45

Expenditures.

Butchers' meat	$1,235 80
Butter and eggs	1,042 62
Flour, bread and meal	1,555 92
Milk	2,436 97
Tea and coffee	1,776 74
Potatoes and other vegetables	702 13
Groceries and provisions not enumerated	2,009 81
Drugs and medicines	516 03
Medical and surgical appliances	143 17
Surgical instruments	69 97
Beer, wine and spirits	40 95
Bedding, napery and general house furnishings	1,273 81
Brooms, brushes, mops, soap and cleaning appliances	218 89
Fuel	3,804 19
Light: gas, oil and candles	514 97
Water supply	567 26
Hay and straw	116 93
Clothing for patients, including boots and shoes	1,529 07
Ice	186 22
Salaries and wages	2,003 00
Taxes and insurance	282 00
Contingencies	149 54
Repairs, ordinary	823 91
Printing, stationery, etc.	202 12
Coffins and funerals	43 35
Total	$22,545 37
Government grant for 1917	$2,195 83

ST. LUKE'S GENERAL HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	98
Admitted	2,043
Births in Hospital	2
Total number under treatment	2,143
Discharged	1,978
Died	75
Under treatment, 30th September, 1917	90
	2,143

Sex.

Male	1,359
Female	784
	2,143

Revenue.

From the Province of Ontario	$2,224 41
From the City of Ottawa	8,589 00
From the County of Carleton	200 00
From paying patients themselves	50,823 95
Income from investments	207 35
From subscriptions and donations	755 05
From other sources	2,752 20
Total	$65,551 96

Expenditures.

Butchers' meat	$8,204 48
Butter and eggs	4,877 46
Flour, bread and meal	1,602 62
Milk	2,718 25
Tea and coffee	612 49
Potatoes and other vegetables	1,319 68
Groceries and provisions not enumerated	3,199 82
Drugs and medicines	2,215 84
Medical and surgical appliances	2,340 07
Surgical instruments	2 30
Beer, wine and spirits	189 90
Bedding, napery and general house furnishings	1,849 56
Brooms, brushes, mops, soap and cleaning appliances	581 09
Fuel	4,946 41
Gas, oil, candles and electric light	2,315 58
Ice	3 60
Salaries and wages	19,418 05
Taxes, insurance and interest	773 52
Contingencies	3,266 64
Repairs, ordinary	3,305 77
Printing and postage	499 91
Clothing for patients	.....
Total	$64,243 04
Government grant for 1917	$2,001 39

GENERAL AND MARINE HOSPITAL, OWEN SOUND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	23
Admitted	467
Births in hospital	61
Total number under treatment	551
Discharged	502
Died	18
Under treatment, 30th September, 1917	31
	551

Sex.

Male	228
Female	323
	551

Revenue.

From the Province of Ontario	$880 92
From the Town of Owen Sound	2,206 00
From the County of Grey	1,000 00
From other municipalities	100 00
From patients themselves for maintenance and treatment	12,522 01
From subscriptions, bequests and donations of private persons	357 95
From all other sources not enumerated	100 00
Total	$17,166 88

Expenditures.

Butchers' meat and fish	$1,441 62
Butter and eggs	771 72
Flour, bread and meal	522 81
Milk	546 67
Tea and coffee	208 50

GENERAL AND MARINE HOSPITAL, OWEN SOUND.—*Continued.*

Potatoes and other vegetables	401 73
Groceries and provisions not enumerated	2,459 98
Drugs and medicines	748 81
Medical and surgical appliances	449 58
Beer, wine and spirits	3 80
Bedding, napery and general house furnishings	73 48
Brooms, brushes, mops, soap and cleaning appliances	158 97
Fuel	3,176 50
Electric light, gas, oil	601 48
Ice	50 00
Salaries and wages	4,682 14
Insurance and interest	355 86
Contingencies	768 18
Repairs, ordinary	483 05
Printing, stationery, etc.	156 25
Total	$18,061 13
Government grant for 1917	$414 53

GENERAL HOSPITAL, PARRY SOUND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	11
Admitted	264
Number of births in Hospital	21
Total number under treatment	296
Discharged	269
Died	13
Under treatment, 30th September, 1917	14
	296

Sex.

Male	205
Female	91
	296

Revenue.

From the Province of Ontario	$856 25
From Town of Parry Sound	.....
From paying patients	6,520 45
Subscriptions, donations, etc.	.....
Other sources	797 70
Total	$8,174 40

Expenditures.

Butchers' meat	$717 12
Butter and eggs	549 72
Flour, bread and meal	286 25
Milk	137 45
Tea and coffee	158 45
Potatoes and other vegetables	158 42
Groceries and provisions not enumerated	696 12
Drugs and medicines	415 27
Medical and surgical appliances	54 59
Surgical instruments	25 00
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	124 96
Brooms, brushes, soap and cleaning	110 06
Fuel	845 04
Electric light, gas, oil	191 80
Water supply	65 40
Ice supply	24 50
Printing, stationery, etc.	15 50
Salaries and wages	3,408 00
Contingencies	.....
Repairs, ordinary	125 75
Taxes and insurance	65 00
Total	$8,174 40
Government grant for 1917	$532 30

ST. JOSEPH'S GENERAL HOSPITAL, PARRY SOUND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	18
Admitted	305
Births in Hospital	37
Total number under treatment	360
Discharged	324
Died	23
Under treatment, 30th September, 1917	13
	360

ST. JOSEPH'S GENERAL HOSPITAL, PARRY SOUND.—*Continued.*

Sex.

Male	231
Female	129
	360

Revenue.

From the Province of Ontario	$1,180 58
From the Town of Parry Sound	87 00
From other municipalities of the Province	.....
From patients themselves for maintenance and treatment.	6,237 10
From subscriptions, donations and bequests from private individuals	213 75
From all other sources	275 00
Total	$7,993 43

Expenditures.

Butchers' meat	$434 97
Butter and eggs	248 69
Flour, bread and meal	471 32
Milk	120 98
Tea and coffee	213 57
Potatoes and other vegetables	207 16
Groceries and provisions not enumerated	687 91
Drugs and medicines	256 98
Surgical instruments	295 66
Beer, wine and spirits	15 60
Bedding, napery and general house furnishings	247 91
Brooms, brushes, mops, soap and cleaning appliances	80 35
Fuel	900 50
Electric light, gas, oil, candles	128 70
Water supply	57 22
Salaries and wages	791 00
Ice supply	35 38
Contingencies	339 25
Repairs, ordinary	80 00
Printing and postage	81 90
Hay and straw	60 00
Taxes and insurance	123 00
Clothing for patients	9 80
Total	$5,887 85
Government grant for 1917	$905 50

GENERAL HOSPITAL, PEMBROKE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	43
Admitted	860
Total number under treatment	903
Discharged	812
Died	50
Under treatment, 30th September, 1917	41
	903

Sex.

Male	374
Female	529
	903

Revenue.

From the Province of Ontario	$2,632 34
From the County of Renfrew	200 00
From Town of Pembroke	1,500 00
From other municipalities	20 00
From patients themselves	13,844 85
From subscriptions, bequests and donations of private individuals	602 85
From all other sources	120 00
Total	$18,920 04

Expenditures.

Butchers' meat	$1,730 00
Butter and eggs	774 24
Flour, bread and meal	687 94
Milk	441 15
Tea and coffee	388 20
Potatoes and other vegetables	492 65
Groceries and provisions not enumerated	2,036 75
Surgical instruments	460 20
Drugs and medicines	460 81
Medical and surgical appliances	245 29
Beer, wine and spirits	168 53
Bedding, napery and general house furnishings	291 87
Brooms, brushes, mops, soap and cleaning appliances	214 61
Fuel	2,273 90
Electric lght, gas, oil and candles	467 62
Water	83 45
Hay and straw	492 92
Clothing for patients, including boots and shoes	374 15
Ice	42 12
Salaries and wages	3,492 46
Contingencies	19 60
Repairs, ordinary	988 94
Taxes and insurance	545 40
Printing, stationery, etc.	19 00
Hardware	890 13
Total	$18,081 93
Government grant for 1917	$2,545 62

COTTAGE HOSPITAL, PEMBROKE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	14
Admitted	252
Births in Hospital	20
Total number under treatment	286
Discharged	269
Died	10
Under treatment, 30th September, 1917	7
	286

Sex.

Male	144
Female	142
	286

Revenue.

From the Province of Ontario	$616 23
From the County of Renfrew.	200 00
From Town of Pembroke	1,000 00
From patients themselves for maintenance and treatment	5,384 80
From endowments, investments, etc.	.....
From subscriptions, donations and bequests from private individuals	1,924 18
From other sources	20 00
Total	$9,145 21

Expenditures.

Butchers' meat	$435 74
Butter and eggs	512 64
Flour, bread and meal	216 25
Milk	240 15
Tea and coffee	50 45
Potatoes and other vegetables	142 29
Groceries and provisions not enumerated	828 80
Drugs and medicines	165 28
Medical and surgical appliances	1,175 66
Surgical instruments	1 80
Beer, wine and spirits	2 40
Bedding, napery and general house furnishings	539 47
Brooms, brushes, mops, soap and cleaning appliances	47 13
Fuel	642 50
Electric light, gas, oil and candles	158 13
Water supply	43 20
Salaries and wages	2,613 71
Taxes and insurance	3 25
Hay and straw	.....
Contingencies	143 09
Repairs, ordinary	793 58
Ice supply	52 00
Printing, postage, etc.	63 10
Total	$8,870 62
Government grant for 1917	$378 31

GENERAL HOSPITAL, PENETANGUISHENE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	5
Admitted	142
Births in Hospital	29
Total number under treatment	176
Discharged	162
Died	9
Under treatment, 30th September, 1917	5
	176

Sex.

Male	81
Female	95
	176

Revenue.

From the Province	$330 81
From the Town of Penetang.	300 00
From the County of Simcoe.	500 00
From other municipalities	.....
From patients themselves for maintenance and treatment	1,568 40
From subscriptions, donations and bequests from private individuals	10 00
From other sources	872 03
Total	$3,581 24

Expenditures.

Butchers' meat	$244 36
Butter and eggs	150 79
Flour, bread and meal	104 00
Milk	183 38

GENERAL HOSPITAL, PENETANGUISHENE.—*Continued.*

Tea and coffee	.....
Potatoes and other vegetables	.....
Groceries and provisions not enumerated	771 84
Drugs and medicines	237 49
Medical and surgical appliances	.....
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	.....
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	291 75
Light: gas, oil and candles	33 94
Salaries and wages	1,027 00
Taxes and insurance	.....
Contingencies	49 14
Laundry, etc.	346 15
Ice	.....
Repairs, ordinary	107 07
Printing and postage	.....
Total	$3,546 91
Government grant for 1917	$212 21

THE NICHOLLS' HOSPITAL, PETERBOROUGH.

The following summaries show the operations of the Hospital during the official year.

Movements of Patients.

Number under treatment, 1st October, 1916	38
Admitted	1,085
Births in Hospital	90
Total number under treatment	1,213
Discharged	1,101
Died	72
Under treatment, 30th September, 1917	40
	1,213

Sex.

Male	499
Female	714
	1,213

Revenue.

From the Province of Ontario	$1,691 92
From the City of Peterborough	1,282 00
From patients themselves for maintenance and treatment.	19,469 08
From property belonging to Hospital, endowments, etc.	10,230 09
From subscriptions, donations, and bequests from private individuals	19 05
Total	$32,692 14

Expenditures.

Butchers' meat	$1,914 15
Butter and eggs	1,999 61
Flour, bread and meal	848 90
Milk	324 81
Tea and coffee	179 30
Potatoes and other vegetables	678 34
Groceries and provisions not enumerated	2,406 75
Drugs and medicines	1,342 32
Surgical instruments and appliances	2,042 15
Beer, wine and spirits	80 95
Bedding, napery and general house furnishings	1,082 45
Brooms, brushes, mops, soap and cleaning appliances	299 19
Fuel	4,756 67
Electric light, gas, oil, candles	648 86
Water supply	250 67
Clothing for patients	6 25
Ice	124 00
Salaries and wages	9,474 43
Taxes and insurance	573 50
Hay and straw	14 50
Contingencies	837 87
Printing, stationery, etc.	85 92
Repairs, ordinary	1,496 72
Total	$31,468 31
Government grant for 1917	$1,604 76

ST. JOSEPH'S HOSPITAL, PETERBOROUGH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	37
Admitted	631
Births in Hospital	24
Total number under treatment	692

ST. JOSEPH'S HOSPITAL, PETERBOROUGH.—*Continued.*

Discharged	636
Died	38
Under treatment, 30th September, 1917	18
	692

Sex.

Male	312
Female	380
	692

Revenue.

From the Province of Ontario	$1,442 60
From the City of Peterborough	715 00
From patients themselves for maintenance and treatment	11,545 32
From subscriptions, donations and bequests from private individuals	87 00
From all other sources	589 50
Total	$14,379 42

Expenditures.

Butchers' meat	$1,232 48
Butter and eggs	732 67
Flour, bread and meal	413 69
Milk	383 71
Tea and coffee	598 63
Potatoes and other vegetables	695 21
Groceries and provisions not enumerated	966 62
Drugs and medicines	523 42
Medical and surgical appliances	876 21
Beer, wine and spirits	29 74
Bedding, napery and general house furnishings	1,192 72
Brooms, brushes, mops, soap and cleaning appliances	194 35
Fuel	1,899 82
Electric lght, gas, oil and power	557 05
Water supply	197 62
Hay and straw	226 40
Clothing for sisters	.....
Salaries and wages	2,053 75
Printing, stationery, etc.	101 80
Contingencies	163 28
Taxes and insurance	12 00
Repairs, ordinary	1,085 88
Ice supply	52 40
Total	$14,189 15

Government grant for 1917 .. $1,363 66

CHARLOTTE ELEANOR ENGLEHART HOSPITAL, PETROLIA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	9
Admitted	188
Number of births in Hospital	6
Total number under treatment	203
Discharged	179
Died	15
Under treatment, 30th September, 1917	9
	203

Sex.

Male	72
Female	131
	203

Revenue.

From the Province of Ontario	$750 68
From the Town of Petrolia ..	1,000 00
From the County of Lambton	900 00
From paying patients	5,557 01
Subscriptions, donations, etc..	1,975 00
From other sources	526 17
Total	$10,708 86

Expenditures.

Butchers' meat and fish	$348 11
Butter and eggs	522 88
Flour, bread and meal	.....
Milk	95 00
Tea and coffee	.....
Potatoes and other vegetables	.....
Groceries and provisions not enumerated	1,363 97
Drugs and medicines	430 68
Medical and surgical appliances	152 57
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	463 87
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	420 22
Electric light, gas, oil, candles	208 33
Water supply	.....
Hay and straw	125 78
Salaries and wages	3,384 45

CHARLOTTE ELEANOR ENGLEHART HOSPITAL, PETROLIA.—*Continued.*

Contingencies	353 07	Ice	40 06
Repairs, ordinary	393 90	Taxes and insurance	156 25
Laundry	693 65		
Printing, stationery and postage	42 70	Total	$9,641 29
Maintenance of grounds	445 80	Government aid for 1917	$690 16

RAILWAY, MARINE AND GENERAL HOSPITAL, PORT ARTHUR.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	31
Admitted	658
Births in Hospital	40
Total number under treatment	729
Discharged	688
Died	25
Under treatment, 30th September, 1917	16
	729

Sex.

Male	454
Female	275
	729

Revenue.

From the Province of Ontario	$1,655 12
From the City of Port Arthur	4,920 74
From patients themselves for maintenance and treatment.	16,379 02
From subscriptions, donations and bequests from private individuals	23 95
From other sources	11 25
Total	$22,990 08

Expenditures.

Butchers' meat	$1,241 28
Butter and eggs	1,378 70
Flour, bread and meal	618 07
Milk	694 90
Tea and coffee	200 25
Potatoes and other vegetables	385 70
Groceries and provisions not enumerated	1,006 20
Drugs and medicines	436 59
Surgical and medical appliances	1,222 59
Beer, wine and spirits	107 75
Bedding, napery and general house furnishings	1,242 07
Fuel	1,688 20
Brooms, brushes, mops, soap and cleaning appliances	417 90
Electric light, gas, oil, candles	154 33
Water supply	54 08
Ice	127 40
Salaries and wages	6,744 31
Taxes and insurance	371 58
Stationery, printing, etc.	215 19
Contingencies	295 97
Repairs, ordinary	887 04
Surgical instruments	42 39
Nurses' books	50 65
Clothing for patients	76 50
Total	$19,659 64
Government grant for 1917	$2,080 54

ST. JOSEPH'S HOSPITAL, PORT ARTHUR.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	33
Admitted	980
Births in Hospital	90
Total number under treatment	1,103
Discharged	1,036
Died	38
Under treatment, 30th September, 1917	29
	1,103

ST. JOSEPH'S HOSPITAL, PORT ARTHUR.—*Continued.*

Sex.

Male	640
Female	463
	1,103

Revenue.

From the Province of Ontario	$2,014 23
From the City of Port Arthur	5,417 18
From patients themselves for maintenance and treatment	18,620 83
From subscriptions, donations and bequests from private individuals	1,427 91
From other sources	1,285 10
Total	$28,765 25

Expenditures.

Butchers' meat and fish	$2,099 10
Butter and eggs	1,251 88
Flour, bread and meal	828 00
Milk	503 15
Tea and coffee	404 11
Potatoes and other vegetables	242 00
Groceries and provisions not enumerated	2,673 02
Drugs and medicines	987 64
Surgical and medical appliances	687 53
Beer, wine and spirits	106 25
Bedding, napery and general house furnishings	1,368 05
Fuel	4,029 73
Brooms, brushes, mops, soap and cleaning appliances	368 05
Electric light, gas, oil and power	63 61
Water supply	200 67
Ice	225 00
Salaries and wages	5,247 95
Taxes and insurance, telephone and power	812 00
Stationery, printing, etc.	130 32
Contingencies	401 36
Repairs, ordinary	1,126 40
Hay and straw	319 55
Clothing for patients	.....
Surgical instruments	.....
Telephone and power	.....
Interest	5,318 90
Total	$29,394 27

Government grant for 1917 .. $1,423 09

GENERAL HOSPITAL, PORT HOPE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	6
Admitted	264
Births in Hospital	32
Total number under treatment	302
Discharged	271
Died	17
Under treatment, 30th September, 1917	14
	302

Sex.

Male	133
Female	169
	302

Revenue.

From the Province of Ontario	$721 06
From City of Port Hope	500 00
From County of Durham	300 00
From other municipalities	.....
From endowments, investments, etc.	740 34
From patients themselves for maintenance and treatment	7,295 11
From subscriptions, donations and bequests from private individuals	316 41
From other sources	70 22
Total	$9,943 14

Expenditures.

Butchers' meat	$497 02
Butter and eggs	507 71
Bread	214 88
Milk	43 16
Tea and coffee	77 06
Potatoes and other vegetables	201 40
Groceries and provisions not enumerated	418 23
Drugs and medicines, medical and surgical appliances	186 32
Bedding, napery and general house furnishings	483 37
Brooms, brushes, mops, soap and cleaning appliances	38 69
Fuel	772 23
Light: gas, oil and candles	286 25
Salaries and wages	4,242 95
Insurance and taxes	201 13
Contingencies	426 70

GENERAL HOSPITAL, PORT HOPE.—*Continued.*

Repairs, ordinary	60 89	Medical and surgical appliances	294 00
Ice	27 30		
Water	75 64	Total	$9,339 40
Printing, stationery, postage.	78 50		
Hay and straw	203 97	Government grant for 1917 ..	$846 73
Beer, wine and spirits	2 00		

VICTORIA GENERAL HOSPITAL, RENFREW.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	22
Admitted	494
Births in Hospital	38
Total number under treatment	554
Discharged	503
Died	23
Under treatment, 30th September, 1917	28
	554

Sex.

Male	295
Female	259
	554

Revenue.

From the Province of Ontario	$736 16
From the Town of Renfrew ..	1,250 00
From the County of Renfrew	200 00
From other municipalities ..	200 00
From patients for maintenance and treatment	8,831 67
From subscriptions, donations and bequests from private individuals	2,408 83
Total	$13,626 66

Expenditures.

Butchers' meat	$1,108 86
Butter and eggs	941 64
Flour, bread and meal	476 32
Milk	545 80
Tea and coffee	105 55
Potatoes and other vegetables	420 98
Groceries and provisions not enumerated	1,242 68
Medical and surgical appliances	809 82
Surgical instruments	.....
Drugs and medicines	824 44
Bedding, napery and general house furnishings	553 43
Fuel	1,015 67
Electric light, gas, oil, candles	355 15
Water supply	24 50
Ice supply	83 70
Salaries and wages	3,888 17
Laundry	236 67
Contingencies	364 50
Repairs, ordinary	31 95
Brooms, brushes and cleaning	146 94
Beer, wine and spirits	.....
Total	$13,176 77
Government grant for 1917 ..	$757 32

GENERAL AND MARINE HOSPITAL, ST. CATHARINES.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	49
Admitted	1,082
Births in Hospital	220
Total number under treatment	1,351
Discharged	1,248
Died	64
Under treatment, 30th September, 1917	39
	1,351

Sex.

Male	601
Female	750
	1,351

GENERAL AND MARINE HOSPITAL, ST. CATHARINES.—*Continued.*

Revenue.

From the Province of Ontario	$1,555 66
From the City of St. Catharines	6,500 00
From the County of Lincoln.	1,442 00
From other municipalities ..	.....
From patients themselves for maintenance and treatment	24,279 38
From endowments, investments, or other property belonging to the Hospital ..	90 25
From subscriptions, bequests and donations of private persons	1,943 00
From all other sources not above enumerated	1,944 07
Total	$37,754 36

Expenditures.

Butchers' meat and fish	$3,449 25
Flour, bread and meal	1,088 48
Butter and eggs	2,793 18
Milk	1,719 94
Tea and coffee	301 25
Potatoes and other vegetables and fruit	755 55
Groceries and provisions not enumerated	3,268 78
Drugs and medicines	1,525 26
Medical and surgical appliances	1,192 08
Surgical instruments	402 91
Beer, wine and spirits	11 50
Bedding, napery and general house furnishings	2,241 82
Brooms, brushes, mops, soap and cleaning appliances	819 93
Fuel	2,968 83
Electric light, gas, oil, candles	305 04
Water supply	95 40
Ice	456 31
Salaries and wages	9,025 71
Taxes and insurance	267 18
Contingences	417 61
Repairs, ordinary	4,457 71
Printing, stationery, etc.	190 64
Total	$37,754 36
Government grant for 1917 ..	$1,279 02

AMASA WOOD HOSPITAL, ST. THOMAS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	33
Admitted	798
Births in the Hospital	117
Total number under treatment	948
Discharged	863
Died	48
Under treatment, 30th September, 1917	37
	948

Sex.

Male	438
Female	510
	948

Revenue.

From the Province of Ontario	$1,638 73
From the City of St. Thomas	3,000 00
From paying patients themselves	16,434 45
Other sources	2,391 32
Total	$23,464 50

Expenditures.

Butchers' meat	$1,036 27
Butter and eggs	472 87
Flour, bread and meal	560 82
Milk	1,112 98
Tea and coffee	201 35
Potatoes and other vegetables	675 68
Groceries and other provisions not enumerated	3,825 95
Drugs and medicines	1,540 70
Medical and surgical appliances	41 72
Surgical instruments	23 62
Beer, wine and spirits	10 75
Bedding, etc.	1,116 58
Brooms, brushes, mops, soap and cleaning appliances	1,709 96
Fuel	1,579 76
Electric light, gas, oil, candles	693 72
Water supply	77 81
Ice	73 00
Ambulance expenses	111 00
Salaries and wages	5,019 49
Taxes and insurance	29 55
Contingencies	516 68
Repairs, ordinary	225 45
Printing, stationery, etc.	174 09
Coffins and funerals	.....
Bank overdraft	.....
Total	$20,829 78
Government grant for 1917 ..	$1,644 91

GENERAL HOSPITAL, SARNIA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	27
Admitted	580
Births in Hospital	88
Total number under treatment	695
Discharged	624
Died	36
Under treatment, 30th September, 1917	35
	695

Sex.

Male	264
Female	431
	695

Revenue.

From the Province of Ontario	$1,172 57
From the Town of Sarnia	1,000 00
From the County of Lambton	600 00
From patients themselves for maintenance and treatment	14,145 61
From property belonging to the Hospital	1,208 18
From subscriptions, donations, and bequests from private individuals	715 00
From all other sources	2,503 43
Total	$21,344 79

Expenditures.

Butchers' meat	$2,242 21
Butter and eggs	1,520 98
Flour, bread and meal	499 78
Milk	623 15
Tea and coffee	.....
Potatoes and other vegetables	535 13
Groceries and provisions not enumerated	1,786 63
Drugs and medicines	341 98
Surgical instruments and appliances	2,152 20
Beer, wine and spirits	75 45
Bedding, napery and general house furnishings	611 81
Fuel	1,300 43
Electric light, gas, oil and candles	396 61
Laundry, etc.	2,254 75
Ice	133 34
Salaries and wages	4,311 59
Insurance	579 25
Contingencies	1,237 32
Repairs, ordinary	3,943 21
Stationery and printing	173 69
Refunds to patients	103 18
Nurses' home	584 84
Total	$25,407 53

Government grant for 1917 .. $731 02

GENERAL HOSPITAL, SAULT STE. MARIE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	38
Admitted	908
Births in Hospital	38
Total number under treatment	984
Discharged	900
Died	54
Under treatment, 30th September, 1917	30
	984

Sex.

Male	636
Female	348
	984

Revenue.

From the Province of Ontario	$2,551 27
From the City of Sault Ste Marie	1,221 40
From other municipalities	1,829 90
From patients themselves for maintenance and treatment	23,454 45
Subscriptions, donations and bequests of private individuals	3,250 00
From other sources not enumerated	2,396 00
Total	$34,703 02

Expenditures.

Butchers' meat	$2,738 79
Butter and eggs	1,564 27
Flour, bread and meal	840 71

GENERAL HOSPITAL, SAULT STE. MARIE.—*Continued.*

Milk	929 68	Water supply	343 73
Tea and coffee	523 90	Clothing for patients, including boots and shoes	815 55
Potatoes, vegetables and fruit	772 85	Ice	.....
Groceries and provisions not enumerated	2,028 50	Salaries and wages	3,684 51
Drugs and medicines	1,332 10	Contingencies	.....
Medical and surgical appliances	472 33	Repairs, ordinary	12,840 02
Beer, wine and spirits	295 00	Taxes and insurance	478 99
Bedding, napery and general house furnishings	1,203 67	Printing, stationery, etc.	172 21
Brooms, brushes, mops, soap and cleaning appliances	425 75	Hay and straw	.....
Fuel	2,792 39	Total	$34,862 40
Electric light, gas, oil and candles	607 45	Government grant for 1917	$1,737 35

PUBLIC HOSPITAL, SMITH'S FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	38
Admitted	406
Births in Hospital	28
Total number under treatment	472
Discharged	418
Died	33
Under treatment, 30th September, 1917	21
	472

Sex.

Male	200
Female	272
	472

Revenue.

From the Province of Ontario	$1,557 06
From the Town of Smith's Falls	1,200 00
From patients themselves for maintenance and treatment	11,490 66
From subscriptions, donations and bequests from private individuals	450 00
From other sources	4,414 03
From endowments, investments, etc.	986 62
Total	$20,098 37

Expenditures.

Butchers' meat	$1,072 16
Butter and eggs	1,109 70
Flour, bread and meal	576 14
Milk	397 91
Potatoes and other vegetables	605 39
Groceries and provisions not enumerated	1,296 51
Tea and coffee	144 50
Drugs and medicines	1,474 60
Medical and surgical appliances	110 71
Surgical instruments	.....
Bedding, napery and general house furnishings	452 75
Brooms, brushes, mops, soap and cleaning appliances	188 66
Fuel	1,885 35
Light: Gas, oil and power	601 13
Laundry	692 47
Ice	77 22
Salaries and wages	5,043 93
Taxes and insurance	170 00
Contingencies	837 54
Repairs, ordinary	1,325 34
Printing, stationery, etc.	285 95
Hay and straw	.....
Beer, wine and spirits	69 80
Water supply	31 25
Equipment for nurses	49 85
Total	$18,498 86
Government grant for 1917	$1,423 73

ST. FRANCIS' HOSPITAL, SMITH'S FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	28
Admitted	454
Births in Hospital	29
Total number under treatment	511
Discharged	473
Died	13
Under treatment, 30th September, 1917	25
	511

Sex.

Male	227
Female	284
	511

Revenue.

From the Province of Ontario	$867 15
From the Town of Smith's Falls for patients maintenance	950 00
From the County of Lanark	100 00
From paying patients themselves	4,571 30
From subscriptions, bequests, and donations of private individuals	3,323 27
From other sources	.....
Total	$9,811 72

Expenditures.

Butchers' meat	$1,375 00
Butter and eggs	1,033 62
Flour, bread and meal	600 00
Milk	817 92
Tea and coffee	279 94
Potatoes and other vegetables	139 00
Groceries and provisions not enumerated	902 40
Drugs and medicines	309 56
Medical and surgical appliances	.....
Surgical instruments	.....
Alcohol	40 18
Bedding, napery and general house furnishings	289 84
Brooms, brushes, mops, soap and cleaning appliances	184 92
Fuel	1,224 00
Electric light, motor service.	498 75
Water	25 00
Ice	69 75
Salaries and wages	1,296 00
Taxes, insurance and interest	66 11
Stationery, postage, etc.	90 00
Repairs, ordinary	347 83
Contingencies	41 15
Laundry	.....
Clothing, including boots	285 33
Total	$9,916 30
Government aid for 1917	$1,202 24

GENERAL HOSPITAL, STRATFORD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st of October, 1916	21
Admitted	517
Number of births during the year	71
Total number under treatment	609
Discharged	550
Died	29
Under treatment, 30th September, 1917	30
	609

Sex.

Male	244
Female	365
	609

Revenue.

Received from the Province of Ontario	$1,528 51
From the City of Stratford	1,750 00
From the County of Perth	1,000 00
From other municipalities of the Province	335 00
From paying patients	15,680 97
Income from endowments, investments, etc.	12 50
Subscriptions, donations, etc.	3,259 25
From other sources	545 51
Total	$24,111 74

GENERAL HOSPITAL, STRATFORD.—*Continued.*

Expenditures.

Butchers' meat	$1,753 92
Butter and eggs	1,446 43
Flour, bread and meal	756 29
Milk	757 39
Tea and coffee	207 00
Potatoes and other vegetables	694 42
Groceries and provisions not enumerated	1,246 56
Drugs and medicines	339 21
Medical and surgical appliances	1,348 98
Surgical instruments	13 67
Beer, wine and spirits	46 00
Bedding, napery and general house furnishings	106 58
Brooms, brushes, mops, etc...	348 23
Fuel	2,001 66
Electric light, gas, oil, candles	926 86
Water supply	206 33
Ice	111 14
Salaries and wages	5,851 56
Taxes and insurance	229 65
Contingencies	723 22
Repairs, ordinary	3,225 39
Postage, etc.	39 68
Poultry and grain for same	124 26
Total	$15,642 42
Government grant for 1917	$1,028 93

GENERAL HOSPITAL, STRATHROY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	15
Admitted	136
Number of births in the institution during the year	4
Total number under treatment	155
Discharged	131
Died	17
Under treatment, 30th September, 1917	7
	155

Sex.

Male	72
Female	83
	155

Revenue.

Received from the Province of Ontario	$533 11
From the Town of Strathroy.	800 00
From the County of Middlesex	588 00
From paying patients	4,136 82
Subscriptions, donations, etc..	10 00
From sources not enumerated	751 45
From Dominion Government..	143 00
Total	$6,962 38

Expenditures.

Butchers' meat	$332 82
Butter and eggs	245 60
Flour, bread and meal	271 99
Milk	65 28
Tea and coffee	27 91
Potatoes and other vegetables	159 85
Groceries and provisions not enumerated	315 95
Drugs and medicines	273 19
Medical and surgical appliances	89 73
Beer, wine and spirits	3 97
Bedding, napery and general house furnishings	77 84
Brooms, brushes, mops, etc...	269 38
Fuel	974 84
Electric light, gas, oil, candles	91 43
Water supply	36 00
Ice	33 00
Salaries and wages	1,924 53
Contingences	243 08
Repairs, ordinary	908 13
Taxes and insurance	33 75
Printing, stationery, etc.	77 86
Surgical instruments	.....
Hay and straw	11 85
Power for laundry	44 57
Clothing for patients	642 83
Total	$7,155 38
Government grant for 1917	$536 51

ST. JOSEPH'S HOSPITAL, SUDBURY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	79
Number admitted	1,321
Births in Hospital	71
Total number under treatment	1,471
Discharged	1,304
Died	75
Remaining under treatment on the 30th September, 1917	92
	1,471

Sex.

Male	849
Female	622
	1,471

Revenue.

From the Province of Ontario	$4,224 49
From paying patients themselves	26,397 10
Subscriptions, donations and bequests	1,100 00
Town of Sudbury	457 00
From all other sources not above enumerated	1,549 62
Total	$33,728 21

Expenditures.

Butchers' meat	$3,821 17
Butter and eggs	2,160 53
Flour, bread and meal	937 67
Milk	1,812 34
Tea and coffee	388 50
Potatoes and other vegetables	1,301 30
Groceries and provisions not enumerated	1,931 10
Drugs and medicines	2,490 05
Medical and surgical appliances	1,132 50
Beer, wine and spirits	155 72
Bedding, napery and general house furnishings	485 87
Brooms, brushes, mops, soap and cleaning appliances	115 00
Fuel	4,771 11
Electric light, gas and oil	756 20
Hay and straw	38 47
Clothing for patients	838 34
Ice	300 00
Salaries and wages	3,566 20
Contingencies	450 18
Repairs, ordinary	4,743 96
Taxes and insurance	1,031 70
Printing and stationery	315 19
Surgical instruments	27 10
Total	$33,570 20
Government grant for 1917	$3,739 66

GENERAL HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment in all departments of the Hospital, 1st October, 1916	471
Admitted	10,160
Births in the Hospital	901
Total number under treatment	11,532
Discharges, including infants	10,345
Died	642
Under treatment, 30th September, 1917	545
Total	11,532

Sex.

Male	5,262
Female	6,270
	11,532

Revenue.

From the Province of Ontario	$25,555 24
From the City of Toronto, in payment of patients' maintenance	101,725 58
From the County of York in payment of patients' maintenance	4,917 95
From other municipalities of the Province	2,625 60
From paying patients themselves	266,925 78
Income for property belonging to Hospital Trust	51,792 30
Subscriptions, donations, and bequests of private individuals	8,722 00
From all other sources not above enumerated	6,841 52
Total	$469,105 97

GENERAL HOSPITAL, TORONTO.—*Continued.*

Expenditures.

Butchers' meat, poultry and fish	$46,798 20
Butter and eggs	24,352 68
Flour, bread and meal	10,238 33
Milk and cream	19,175 03
Tea and coffee	7,261 78
Potatoes and other vegetables	23,000 90
Groceries and provisions not enumerated	32,000 52
Drugs and medicines	25,567 98
Radiographic department	.....
Medical and surgical appliances, bandages, etc.	6,658 96
Surgical instruments, ordinary, etc.	7,273 97
Beer, wine and spirits	440 92
Bedding, napery and general house furnishings	24,411 34
Clothing, etc. for patients	.....
Laundry, brooms, brushes, mops, soap and cleaning appliances	28,523 33
Fuel, power-house and wages	58,064 91
Light: Gas, oil, electric light	4,602 44
Water supply	1,338 80
Nurses' uniforms and medals	1,645 06
Nurses' text-books	1,826 86
Gardens and grounds	2,581 32
Salaries and wages	129,134 65
Postage and street car fares.	7,136 31
Contingencies, miscellaneous expenses	505 05
Repairs, ordinary	12,622 41
Telephones	3,324 52
Interest on debts and insurance	2,826 12
Printing, postage, stationery, annual report, advertising	889 75
Taxes and insurance	3,345 57
Ambulance service	1,643 86
Warren Fund support	188 25
Total	$487,379 82
Government grant for 1917	$20,936 43

GRACE HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, in the Hospital, 1st October, 1916	104
Admitted	2,151
Births in the Hospital	339
Total number under treatment	2,594
Discharges, including infants	2,359
Died	110
Under treatment, 30th September, 1917	125
	2,594

Sex.

Male	920
Female	1,674
	2,594

Revenue.

From the Government of Ontario	$4,044 24
From the City of Toronto in payment of patients' maintenance	12,635 23
From the County of York	739 50
From other municipalities	67 50
From paying patients themselves	45,081 78
Income from endowments, etc.	2,482 24
Subscriptions, donations and bequests of private individuals	.....
From all sources not above enumerated	.....
Total	$65,050 49

Expenditures.

Butchers' meat	$4,813 67
Butter and eggs	3,440 81
Flour, bread and meal	1,861 46
Milk	3,435 16
Tea and coffee	824 53
Potatoes and other vegetables	1,859 04
Groceries and provisions not enumerated	3,723 16
Drugs and medicines	2,139 31
Medical and surgical appliances	4,271 96
Surgical instruments	514 78
Beer, wine and spirits	39 45
Bedding, napery and general house furnishings	5,679 83
Brooms, brushes, mops, soap and cleaning appliances	1,590 10
Fuel	6,393 39
Light: Electric, oil and candles	1,103 86
Water supply	490 58
Ice	404 03
Salaries and wages	17,751 59
Taxes and insurance	297 79
Contingencies	2,586 28
Repairs, ordinary	3,362 64
Advertising, stationery, etc.	1,295 56
Clothing for patients	89 05
	$70,668 03
Government grant for 1917	$3,177 06

HOSPITAL FOR SICK CHILDREN, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Under treatment, 1st October, 1916	208
Admitted	3,532
Total number under treatment	3,740
Discharged	3,178
Died	379
Under treatment, 30th September, 1917	183
	3,740

Sex.

Male	2,195
Female	1,545
	3,740

Revenue.

From the Province of Ontario	$12,377 49
From the City of Toronto	52,461 28
From municipalities	12,473 92
From patients themselves for maintenance and treatment	29,026 59
From property belonging to Hospital	2,140 45
From subscriptions, donations and bequests from private individuals	45,965 77
From all other sources not enumerated	4,980 30
Total	$159,425 80

Expenditures.

Butchers' meat, game and fish	$7,499 54
Butter and eggs	5,592 92
Flour bread and meal	2,398 75
Milk	9,545 92
Tea and coffee	635 53
Potatoes and other vegetables	4,190 12
Groceries and provisions not enumerated	5,999 09
Drugs and medicines	6,336 05
Medical and surgical appliances	9,110 13
Surgical instruments	475 00
Bedding, napery and general house furnishings	.....
Brooms, brushes, mops, soap and cleaning appliances	3,001 48
Fuel	29,945 33
Light: Electric, gas, oil, candles	2,499 80
Water supply	1,733 38
Clothing for patients, including boots, shoes and linen	2,617 01
Ice	.....
Salaries and wages	81,876 01
Insurance and taxes	1,835 94
Contingencies	3,097 33
Repairs, ordinary	.....
Printing, stationery, etc.	8,578 91
Telephones and electricity	1,853 40
Interest account	1,123 43
Total	$189,945 07
Government grant for 1917	$12,153 18

THE ORTHOPEDIC HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	14
Admitted	318
Total number under treatment	332
Discharges	306
Died	2
Under treatment, 30th September, 1917	24
	332

Sex.

Male	181
Female	151
	332

Revenue.

From the Government of Ontario	$318 99
Income from endowments, etc., or other property belonging to the Hospital	56 12
From paying patients themselves	13,407 57
Subscriptions, donations, and bequests of private individuals	44 25
From all other sources not above enumerated	6,795 90
Total	$20,622 83

Expenditures.

Butchers' meat	$710 06
Butter and eggs	869 32
Flour, bread and meal	251 64

THE ORTHOPEDIC HOSPITAL, TORONTO.—*Continued.*

Milk	582 78
Tea and coffee	124 87
Potatoes and other vegetables	431 98
Groceries and provisions not enumerated	851 37
Drugs and medicines	76 75
Medical and surgical appliances, surgical instruments.	496 06
Bedding, napery and general house furnishings	267 69
Brooms, brushes, mops, soap and cleaning appliances	265 39
Fuel	1,100 00
Electric light, gas, oil and candles	259 60
Water supply	45 67
Ice	29 89
Salaries and wages	3,406 29
Taxes and insurance	39 50
Repairs, ordinary	379 99
Gymnasium and sundries	7,175 12
Sundries and material	1,589 10
Clothing for patients	19 30
Contingencies	643 98
Total	$19,631 70
Government grant for 1917	$300 75

ST. JOHN'S HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	12
Admitted	264
Number of births	.....
Total number under treatment	276
Discharged	243
Died	14
Under treatment, 30th September, 1917	19
	276

Sex.

Male	1
Female	275
	276

Revenue.

From the Province of Ontario	$957 45
From the City of Toronto	1,018 00
From other municipalities	.....
From patients themselves for maintenance and treatment	14,158 92
From subscriptions, donations and bequests from private individuals	1,892 83
From other sources	68 50
Total	$18,095 70

Expenditures.

Butchers' meat	$1,659 39
Butter and eggs	1,470 93
Bread	797 80
Milk	898 62
Tea and coffee	255 40
Potatoes and other vegetables	1,219 13
Groceries and provisions not enumerated	910 94
Drugs and medicines	1,187 94
Beer, wine and spirits	35 35
Bedding, napery and general house furnishings	1,065 34
Brooms, brushes, mops, soap and cleaning appliances	363 82
Fuel	1,919 41
Electric light, gas, oil, candles	760 58
Salaries and wages	4,054 58
Insurance and taxes	124 44
Contingencies	245 11
Repairs, ordinary and additions	962 91
Hay and straw	.....
Printing, statonery, etc.	145 06
Water supply	203 15
Total	$18,279 90
Government grant for 1917	$1,202 50

ST. MICHAEL'S HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	235
Admitted	4,553
Births in Hospital	357
Total number under treatment	5,145
Discharged	4,583
Died	313
Under treatment, 30th September, 1917	249
	5,145

Sex.

Male	2,496
Female	2,649
	5,145

Revenue.

From the Government of Ontario	$16,151 76
From the City of Toronto in payment of patients' maintenance	46,128 00
From the County of York	.....
From other municipalities	.....
From paying patients themselves	77,555 77
Subscriptions, donations and bequests of private individuals	7,369 66
From all other sources not above enumerated	15,158 57
Total	$162,363 76

Expenditures.

Butchers' meat, poultry and fish	$19,857 00
Butter and eggs	11,663 85
Flour, bread and meal	4,666 52
Milk	9,197 58
Tea and coffee	2,961 53
Potatoes, other vegetables and fruit	9,795 73
Groceries and provisions not enumerated	11,868 30
Drugs and medicines	11,447 00
Medical and surgical appliances	10,520 45
Surgical instruments	3,224 86
Beer, wine and spirits	680 43
Bedding, napery and general house furnishings	6,542 71
Brooms, brushes, mops, soap and cleaning appliances	5,981 62
Fuel	10,372 41
Electric light, gas, oil, candles	5,823 36
Water supply	742 00
Ice	.....
Salaries and wages	38,243 00
Taxes and insurance	223 60
Contingencies	4,555 98
Repairs, ordinary	7,206 25
Telephone service	227 77
Advertising, printing, stationery, etc.	3,311 95
Clothing for patients, including boots and shoes	270 25
Total	$179,384 15
Government grant for 1917	$13,464 68

THE WELLESLEY HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	57
Admitted	1,738
Births in Hospital	148
Total number under treatment	1,943
Discharged	1,844
Died	42
Under treatment, 30th September, 1917	57
	1,943

Sex.

Male	666
Female	1,277
	1,943

Revenue.

From the Province of Ontario	$22 40
From the City of Toronto	39 00
From the County of York	.....
From other municipalities of the Province	.....
From paying patients	98,433 66

THE WELLESLEY HOSPITAL, TORONTO.—*Continued.*

Subscriptions, donations, etc..	.....
Other sources	.....
Total	$98,495 06

Expenditures.

Butchers' meat and fish	$8,846 41
Butter and eggs	4,837 36
Flour, bread and meal	1,483 35
Milk	3,990 29
Tea and coffee	1,145 02
Potatoes and other vegetables	4,895 99
Groceries and provisions not enumerated	4,604 61
Drugs and medicines	1,878 35
Medical and surgical appliances	1,978 60
Surgical instruments	122 02
Beer, wine and spirits	.....
Bedding, napery and general furnishings	2,463 77
Brooms, brushes, mops, soap and cleaning appliances ..	1,673 07
Fuel	8,325 50
Electric light, gas, oil, candles	.....
Water supply	455 97
Salaries and wages	22,933 87
Taxes, interest and insurance	3,524 87
Contingencies	5,805 56
Repairs, ordinary	1,311 09
Ice supply	.....
Telephone	.....
Printing, stationery, etc.	2,117 88
Total	$82,393 58
Government aid for 1917	$30 40

WESTERN HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	161
Admitted	3,872
Births in Hospital	514
Total number under treatment	4,547
Discharged	4,098
Died	283
Under treatment, 30th September, 1917	166
	4,547

Sex.

Male	1,841
Female	2,706
	4,547

Revenue.

From the Province of Ontario	$8,659 26
From the City of Toronto ..	22,009 28
From the patients for maintenance and treatment	88,364 13
From subscriptions, donations and bequests from private individuals	1,063 39
From other sources	7,441 80
From other municipalities ..	1,195 80
Total	$128,733 66

Expenditures.

Butchers' meat	$9,840 89
Butter and eggs	6,819 22
Flour, bread and meal	2,157 29
Milk	5,645 54
Tea and coffee	1,309 14
Potatoes and other vegetables	3,769 98
Groceries and provisions not enumerated	7,984 04
Drugs and medicines	5,801 99
Medical and surgical appliances and instruments	9,572 10
Telephones	700 00
Beer, wine and spirits	1,059 14
Bedding, napery and general house furnishings	5,399 76
Brooms, brushes, mops, soap and cleaning appliances ...	2,661 41
Fuel	9,464 64
Light: Gas, oil and candles ..	2,653 94
Water	969 50
Ice supply	778 30
Salaries and wages	43,876 02
Taxes and insurance	1,448 45
Contingencies—interest	9,352 86
Repairs, ordinary	3,731 08
Clothing for patients	768 70
Printing, postage, etc.	2,449 75
Interest	900 00
Total	$139,113 24
Government grant for 1917 ..	$6,674 81

WOMEN'S COLLEGE HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	20
Number admitted	400
Births in Hospital	21
Total number under treatment	441
Discharged	403
Died	8
Under treatment, 30th September, 1917	30
	441

Sex.

Male	.....
Female	441
	441

Revenue.

From the Province of Ontario	$1,139 99
From the City of Toronto	1,321 75
From the County of York	.....
From other municipalities of the Province	.....
From paying patients	7,333 25
From property belonging to the Hospital	.....
From subscriptions, bequests and donations from private individuals	597 18
From other sources not enumerated	35 33
Total	$10,427 50

Expenditures.

Butchers' meat	$789 07
Butter and eggs	482 01
Flour, bread and meal	226 82
Milk	585 03
Tea and coffee	70 03
Potatoes and other vegetables	594 03
Groceries and provisions not enumerated	858 08
Drugs and medicines	366 27
Medical and surgical appliances	923 72
Bedding, napery and general house furnishings	254 80
Brooms, brushes, mops, soap and cleaning appliances	50 00
Fuel	541 51
Electric light, gas, oil, candles	373 91
Water supply	44 97
Ice supply	58 34
Salaries and wages	4,358 87
Taxes and insurance	20 78
Contingencies	411 35
Repairs, ordinary	302 34
Laundry	968 41
Printing, stationery, etc.	150 40
Surgical instruments	328 65
Telephone	152 68
Total	$12,911 97
Government grant for 1917	$1,049 90

GENERAL HOSPITAL, WALKERTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	11
Number admitted	214
Number of births	16
	241
Discharged	217
Died	15
Under treatment, 30th September, 1917	9
	241

Sex.

Male	99
Female	142
	241

Revenue.

From the Province of Ontario	$442 91
From the Town of Walkerton	100 00
From the County of Bruce	1,500 00
From other municipalities of the Province	30 00
From endowments, investments, etc.	.....
From paying patients	6,335 65
From subscriptions, bequests and donations of private individuals	1,912 12
From other sources not enumerated	80 39
Total	$10,401 07

GENERAL HOSPITAL, WALKERTON.—*Continued.*

Expenditures.

Butchers' meat	$653 40
Butter and eggs	505 47
Flour, bread and meal	278 77
Milk	348 17
Tea and coffee	154 53
Potatoes and other vegetables	177 76
Groceries and provisions not enumerated	912 11
Drugs and medicines	384 26
Medical and surgical appliances	191 52
Beer, wine and spirits	52 50
Bedding, napery and general house furnishings	171 73
Brooms, brushes, mops, soap and cleaning appliances	130 78
Fuel	1,143 15
Light: electric, gas, oil and candles	314 00
Water supply	45 00
Ice supply	39 70
Salaries and wages	2,746 01
Insurance	57 99
Contingencies	12 50
Repairs, ordinary	337 32
Printing, postage, etc.	83 68
Clothing	2 00
Total	$8,751 35
Government grant for 1917	$250 97

GENERAL HOSPITAL, WELLAND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	30
Admitted	983
Number of births in Hospital	31
Total number under treatment	1,044
Discharged	962
Died	55
Under treatment, 30th September, 1917	27
	1,044

Sex.

Male	698
Female	346
	1,044

Revenue.

From the Province of Ontario	$2,013 67
From the Town of Welland	.....
From the County of Welland	.....
From other municipalities	.....
From paying patients	15,818 94
Subscriptions, donations, etc.	1,700 00
Other sources	80 37
Total	$19,612 98

Expenditures.

Butchers' meat	$764 29
Butter and eggs	888 48
Flour, bread and meal	651 73
Milk	889 29
Tea and coffee	18 60
Potatoes and other vegetables	420 45
Groceries and provisions not enumerated	1,337 43
Drugs and medicines	894 94
Medical and surgical appliances	925 75
Surgical instruments	118 91
Beer, wine and spirits	.....
Bedding, house furnishings, etc.	453 36
Brooms, brushes, mops, soap and cleaning appliances	69 38
Fuel	734 55
Electric light, gas, oil, candles	575 40
Ice	55 00
Salaries and wages	3,669 41
Contingencies	963 13
Repairs, ordinary	1,010 96
Water supply	50
Printing, postage and stationery	135 77
Telephone and electricity	.....
Taxes and insurance	174 40
Clothing for patients	.....
Ambulance expenses	185 75
Total	$14,937 48
Government grant for 1917	$2,239 79

HOTEL DIEU HOSPITAL, WINDSOR.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	57
Admitted	1,420
Births in Hospital	159
Total number under treatment	1,636
Discharged	1,481
Died	109
Under treatment, 30th September, 1917	46
	1,636

Sex.

Male	762
Female	874
	1,636

Revenue.

From the Province of Ontario	$2,562 84
From the Town of Windsor	2,125 66
From the County of Essex	612 55
From patients themselves for maintenance and treatment	25,615 55
Subscriptions, donations and bequests	1,318 75
From other sources not enumerated	5,229 22
Total	$37,464 57

Expenditures.

Butchers' meat	$4,466 73
Butter and eggs	2,772 17
Flour, bread and meal	1,478 91
Milk	1,557 30
Tea and coffee	1,105 99
Potatoes and other vegetables	1,213 08
Groceries and provisions not enumerated	4,454 71
Drugs and medicines	1,550 29
Medical and surgical appliances	3,445 82
Surgical instruments	12 72
Beer, wine and spirits	200 77
Bedding, napery and general house furnishings	4,066 00
Brooms, brushes, mops, soap and cleaning appliances	719 39
Fuel	1,157 28
Light: gas, oil and candles	555 00
Water supply	54 64
Hay and straw	245 43
Clothing for patients, including boots and shoes	9 85
Ice	597 98
Salaries and wages	5,474 13
Taxes and insurance	581 18
Contingencies	312 51
Repairs, ordinary	1,281 30
Printing, stationery, etc.	357 58
Total	$37,670 76
Government grant for 1917	$2,263 79

GENERAL HOSPITAL, WINGHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	5
Admitted	130
Number of births in Hospital	12
Total number under treatment	147
Discharged	134
Died	7
Under treatment, 30th September, 1917	6
	147

Sex.

Male	50
Female	97
	147

Revenue.

From the Province of Ontario	$455 90
From the Town of Wingham	200 00
From the County of Huron	483 12
From other municipalities	.....
From paying patients	4,102 00
Subscriptions, donations, etc.	89 34
Other sources	16 00
Total	$5,346 36

Expenditures.

Butchers' meat	$275 47
Butter and eggs	322 21
Flour, bread and meal	154 57
Milk	145 68
Tea and coffee	47 29
Potatoes and other vegetables	53 86
Groceries and provisions not enumerated	362 12

GENERAL HOSPITAL, WINGHAM.—*Continued.*

Drugs and medicines	125 24
Medical and surgical appliances	283 33
Bedding, napery and general house furnishings	259 89
Brooms, brushes, mops, soap and cleaning appliances	65 25
Fuel	81 65
Electric light, gas, oil, candles	102 46
Water supply	18 52
Ice	20 00
Salaries and wages	1,568 87
Contingencies	851 10
Repairs, ordinary	138 94
Taxes and insurance	26 80
Printing, stationery, etc.	18 75
Beer, wine and spirits	15 80
Fire appliances	179 99
Total	$5,117 79
Government grant for 1917	$192 57

THE WOODSTOCK HOSPITAL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	25
Admitted	483
Births	41
Total number under treatment	549
Discharged	488
Died	35
Under treatment, 30th September, 1917	26
	549

Sex.

Male	231
Female	318
	549

Revenue.

From the Province of Ontario	$988 46
From the Town of Woodstock	1,324 11
From the County of Oxford	1,200 00
Income from endowments and investments	1,226 69
From paying patients themselves	13,127 93
Subscriptions, donations and bequests	170 00
Received from other sources.	.....
Total	$18,037 19

Expenditures.

Butchers' meat	$1,832 48
Butter and eggs	1,516 56
Flour, bread and meal	345 21
Milk	615 20
Tea and coffee	299 55
Potatoes and other vegetables	126 50
Groceries and other provisions not enumerated	2,224 03
Drugs and medicines	427 17
Medical and surgical appliances	764 38
Beer, wine and spirits	5 00
Bedding, etc.	491 16
Brooms, brushes, mops, soap and cleaning appliances	235 36
Fuel	1,979 01
Electric light, gas, oil and candles	633 10
Ice	155 11
Salaries and wages	4,715 97
Insurance and taxes	409 56
Contingencies	655 68
Repairs, ordinary	324 53
Printing, stationery, etc.	99 72
Water supply	125 88
Total	$17,981 16
Government grant for 1917	$894 67

BRANT SANATORIUM, BRANTFORD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	14
Admitted	50
Total number under treatment	64
Discharged	24
Died	19
Under treatment, 30th September, 1917	21
	64

BRANT SANATORIUM, BRANTFORD.— *Continued.*

Sex.

Male	41
Female	23
	64

Revenue.

From the Province of Ontario	$2,070 86
From the City of Brantford	4,126 96
From the County of Brant	.....
From other municipalities of the Province	1,694 52
From paying patients	2,124 93
Subscriptions, donations, etc.	.....
Other sources	545 52
Total	$10,562 79

Expenditures.

Butchers' meat and fish	$1,349 69
Butter and eggs	562 15
Flour, bread and meal	259 39
Milk	746 81
Tea and coffee	58 99
Potatoes and other vegetables	377 63
Groceries and provisions not enumerated	598 27
Drugs and medicines	134 30
Medical and surgical appliances	153 13
Surgical instruments	15 00
Beer, wine and spirits	1 60
Bedding, napery and general furnishings	383 18
Brooms, brushes, mops, soap and cleaning appliances	59 60
Fuel	1,754 96
Electric light, gas, oil, candles	137 86
Water supply	20 00
Salaries and wages	3,719 53
Taxes, interest and insurance	75 00
Contingencies	441 36
Repairs, ordinary	174 49
Ice supply	130 00
Clothing for patients	.....
Printing, stationery, etc.	120 70
Interest on loan	42 18
Total	$11,315 82

Government aid for 1917 .... $3,015 43

NATIONAL SANATORIUM FOR CONSUMPTIVES, GRAVENHURST.

(Muskoka Cottages.)

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	48
Admitted	175
Total number under treatment	223
Discharged	154
Died	8
Under treatment, 30th September, 1917	61
	223

Sex.

Male	117
Female	106
	223

Revenue.

From the Dominion Government	$2,950 59
From paying patients themselves	52,121 93
From subscriptions, bequests and donations of private individuals	350 00
From other sources	3,069 13
Total	$58,491 65

Expenditures.

Butchers' meat	$14,248 49
Butter and eggs	6,441 99
Four, bread and meal	2,387 40
Milk	3,111 44
Tea and coffee	696 21
Potatoes and other vegetables	2,336 17
Groceries and provisions not enumerated	5,074 42
Drugs and medicines	1,136 02
Medical and surgical appliances	245 27
Bedding, napery and general house furnishings	4,870 50
Brooms, brushes, mops, soap and cleaning appliances and laundry	3,089 47
Fuel	6,957 26
Electric light, oil and candles	932 93
Maintenance of plant	9,165 17
Telephone	299 54
Ice	124 00
Salaries and wages	16,381 17
Freight and livery	252 01
Advertising, printing, postage, etc.	635 22
Contingencies	335 64
Repairs, ordinary	2,434 00
Insurance premiums	547 62
Bank interest and exchange	.....

NATIONAL SANATORIUM FOR CONSUMPTIVES, GRAVENHURST.—*Continued.*

Travelling expenses	503 02	General expenses	246 16
Improving grounds	214 63	Hay and straw	1,422 49
H. O. expense	719 53	Outside furnishings	160 89
X-Ray and medical staff supplies	76 91	Total	$65,399 34

MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	240
Admitted	370
Number of births	.....
Total number under treatment	610
Discharged	306
Died	45
Under treatment, 30th September, 1917	259
	610

Sex.

Male	361
Female	249
	610

Revenue.

From the Province of Ontario	$41,131 29
From the City of Toronto, in payment of patients' maintenance	55,601 44
From other municipalities	699 30
From endowments, investments, etc.	7,234 73
From paying patients themselves	8,532 41
Subscriptions, donations, and bequests of private individuals	25,580 69
From all other sources not above enumerated	2,036 65
From Dominion Government	19,520 71
Total	$160,337 22

Expenditures.

Butchers' meat	$23,218 86
Butter and eggs	11,282 32
Flour, bread and meal	4,616 18
Milk	6,872 83
Tea and coffee	1,659 33
Potatoes and other vegetables	4,600 14
Groceries and provisions not enumerated	9,794 63
Drugs and medicines	3,584 99
Medical and surgical appliances, dispensary	134 82
Bedding, napery and general house furnishings	5,836 73
Brooms, brushes, mops, soap and cleansing appliances	1,507 64
Fuel	8,418 55
Maintenance of plant	14,442 85
Improving grounds	781 62
Travelling expenses	567 71
Electric light, gas, oil and candles	1,118 47
Ice supply	196 61
Salaries and wages	41,697 82
Insurance and taxes	674 22
Laundry	6,074 35
Contingencies	222 90
Repairs, ordinary	3,863 33
Interest and bank collection	59 07
Postage and advertising	1,928 56
Freight and livery	1,224 61
Surgical instruments	.....
X-Ray expenses	610 31
Head office expenses	3,430 47
Outdoor furnishings	109 23
Medical staff supplies	12 00
Maintenance of transferred patients	24,684 28
Telephones	323 69
General expenses	4,885 76
Total	$188,434 88
Government grant for 1917	$35,592 00

MOUNTAIN SANATORIUM, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	102
Admitted	215
Total number under treatment	317
Discharged	132
Died	21
Under treatment, 30th September, 1917	164
	317

MOUNTAIN SANATORIUM, HAMILTON.—*Continued.*

Sex.

Male	171
Female	146
	317

Revenue.

From the Province of Ontario	$14,936 15
From the City of Hamilton for patients' maintenance	21,062 00
From paying patients themselves	7,598 96
From endowments, investments, etc.	549 73
From other sources	.....
Total	$44,146 84

Expenditures.

Butchers' meat	$6,917 50
Butter and eggs	4,273 04
Flour, bread and meal	1,729 86
Milk	2,460 76
Potatoes and other vegetables and fruit	1,175 08
Groceries and provisions not enumerated	2,452 43
Drugs and medicines	2,293 37
Dispensary work	1,036 19
Brooms, brushes, mops, soap and cleaning appliances.. / Bedding, napery and general house furnishings	911 87
Fuel	3,963 69
Light: gas, oil and candles	496 49
Farm and stable expenses	510 58
Contingencies	4,391 93
Salaries and wages	15,549 58
Taxes and insurance	219 69
Laundry	747 37
Advertising, stationery and postage, etc.	882 09
Repairs, ordinary	1,909 28
Ice	47 40
Interest	204 29
Water supply	389 55
Total	$52,562 04
Government grant for 1917	$19,327 72

ESSEX TUBERCULOSIS HOSPITAL, KINGSVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	19
Admitted	44
Total number under treatment	63
Discharged	38
Died	4
Under treatment, 30th September, 1917	21
	63

Sex.

Male	30
Female	33
	63

Revenue.

From the Government of Ontario for maintenance	$2,831 58
From the County of Essex	.....
From the City of Windsor	1,406 32
From other municipalities	1,239 35
From paying patients	4,652 62
From subscriptions, bequests and donations from private individuals	3,062 68
From other sources not enumerated	463 25
Total	$13,655 80

Expenditures.

Butchers' meat and fish	$1,170 92
Butter and eggs	546 67
Flour, bread and meal	398 71
Milk	709 30
Tea and coffee	76 85
Potatoes and other vegetables	308 67
Groceries and provisions not enumerated	663 52
Drugs and medicines	315 57
Medical and surgical appliances	64 15
Bedding, napery and general house furnishings	727 99
Brooms, brushes, mops, soap and cleaning appliances	64 10
Fuel	415 85
Electric light, gas, oil, candles	75 97
Water supply	76 30
Ice supply	214 86
Salaries and wages	4,422 35
Taxes, insurance and interest	346 52
Contingencies	1,698 45
Repairs, ordinary	323 52
Printing, stationery, etc.	171 75
Total	$12,792 02
Government grant for 1917	$3,132 86

QUEEN ALEXANDRA SANATORIUM, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	75
Admitted	153
Total number under treatment	228
Discharged	124
Died	.....
Under treatment, 30th September, 1917	104
	228

Sex.

Male	163
Female	65
	228

Revenue.

From the Province of Ontario	$10,743 43
From the City of London	8,052 10
From the County of Middlesex	410 00
From other municipalities	2,116 50
From patients themselves for maintenance and treatment	3,766 90
From subscriptions, donations and bequests from private individuals	289 33
From other sources	2,569 59
From Dominion Government	16,249 98
Total	$44,197 83

Expenditures.

Butchers' meat	$5,210 42
Butter and eggs	3,466 04
Flour, bread and meal	1,145 12
Milk	567 21
Tea and coffee	330 98
Potatoes and other vegetables	739 78
Groceries and provisions not enumerated	2,415 61
Drugs and medicines	303 95
Medical and surgical appliances	701 80
Surgical instruments	37 05
Beer, wine and spirits	50
Bedding, napery and general house furnishings	1,133 01
Brooms, brushes, mops, soap and cleaning appliances	544 19
Fuel	3,124 40
Electric light, gas, oil, candles	400 52
Salaries and wages	11,366 69
Taxes and insurance	152 25
Contingencies	119 25
Farm	3,118 62
Stable supplies	3,361 50
Ice supply	89 36
Printing, stationery, postage, etc.	458 89
Repairs, ordinary	1,407 96
Clothing for patients	40 62
Visiting nurses' expenses	860 60
Total	$41,096 32
Government grant for 1917	$8,658 00

ROYAL SANATORIUM, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	61
Admitted	133
Total number under treatment	194
Discharged	96
Died	51
Under treatment, 30th September, 1917	47
	194

Sex.

Male	102
Female	92
	194

Revenue.

From the Province of Ontario	$9,139 72
From the City of Ottawa	24,583 20
From paying patients	2,776 65
From all other sources	.....
Total	$36,499 57

Expenditures.

Butchers' meat, poultry and fish	$3,347 63
Butter and eggs	2,064 76
Flour, bread and meal	830 60
Milk	1,623 23
Tea and coffee	273 29
Potatoes and other vegetables	883 93
Groceries and provisions not enumerated	1,254 82
Brooms, brushes, soap and cleaning appliances	337 72

ROYAL SANATORIUM, OTTAWA.—*Continued.*

Drugs, medicines and appliances	1,087 79	Salaries and wages	14,700 56
Beer, wine and spirits	60 00	Contingencies	542 30
Surgical instruments	42 90	Repairs, ordinary	1,230 41
Bedding, napery and general house furnishings	1,944 89	Taxes and insurance	194 67
Fuel	4,588 24	Stationery, postage, etc.	123 56
Electric light, gas, oil and candles	559 21	Other expenditures, not enumerated	571 78
Water supply	.....	Total	$36,499 57
Ice supply	237 28	Government grant for 1917	$9,373 29

CONSUMPTIVE SANATORIUM, ST. CATHARINES.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	13
Admitted	33
Total number under treatment	46
Discharged	24
Died	10
Under treatment, 30th September, 1917	12
	46

Sex.

Male	28
Female	18
	46

Revenue.

From the Province of Ontario	$1,146 86
From the City of St. Catharines	1,211 00
From other municipalities	1,979 50
From patients themselves	756 60
From endowments, investments, etc.	130 31
From subscriptions, bequests and donations of private individuals	120 50
From other sources	130 00
From Dominion Government	87 00
Total	$5,561 77

Expenditures.

Butchers' meat	$574 28
Butter and eggs	262 13
Flour, bread and meal	136 73
Milk	106 88
Tea and coffee	72 58
Potatoes and other vegetables	140 68
Groceries and provisions not enumerated	455 82
Drugs and medicines	181 61
Bedding, napery and general house furnishings	172 95
Brooms, brushes, mops, soap and cleaning appliances	92 06
Fuel	349 09
Electric light, oil, candles	28 60
Ice	54 00
Salaries and wages	1,658 84
Taxes and insurance	3 00
Contingencies	332 29
Repairs, ordinary	297 20
Water supply	10 80
Hay and straw	51 59
Beer, wine and spirits	9 60
Printing and postage	28 95
Total	$5,019 68
Government grant for 1917	$1,597 72

THE PREVENTORIUM, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	38
Admitted	89
Total number under treatment	127
Discharged	81
Died	.....
Under treatment, 30th September, 1917	46
	127

THE PREVENTORIUM, TORONTO.—*Continued.*

Sex.

Male	59
Female	68
	127

Revenue.

From the Province of Ontario	$5,990 15
From City of Toronto	18,860 10
From patients themselves for maintenance and treatment	74 20
From property belonging to Hospital, endowments, etc.	.....
From subscriptions, donations, and bequests from private individuals	79 94
From all other sources, not above enumerated	84 90
Total	$25,089 29

Expenditures.

Butchers' meat	$855 26
Butter and eggs	1,118 48
Flour, bread and meal	608 39
Milk	2,048 46
Tea and coffee	27 00
Potatoes and other vegetables	332 16
Groceries and provisions not enumerated	1,052 23
Drugs and medicines	69 48
Surgical instruments and appliances	.....
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	912 93
Brooms, brushes, mops, soap and cleaning appliances	197 86
Fuel	1,222 91
Electric light, gas, oil, candles	383 70
Water supply	10 60
Clothing for patients	454 30
Ice	71 40
Salaries and wages	4,446 13
Taxes and insurance	8 53
Contingencies	494 00
Printing, stationery, etc.	93 91
Repairs, ordinary	1,089 90
Total	$15,497 63

Government grant for 1917 .. $6,836 15

TORONTO FREE HOSPITAL FOR CONSUMPTIVES, WESTON.

(Including Queen Mary Hospital for Consumptive Children, and King Edward Annex.)

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1916	299
Admitted	467
Births in Hospital	.....
Total number under treatment	766
Discharged	253
Died	196
Under treatment, 30th September, 1917	317
	766

Sex.

Male	467
Female	299
	766

Revenue.

From the Province of Ontario	$48,013 29
From the City of Toronto	92,770 00
From other municipalities	7,197 78
From patients themselves for maintenance and treatment.	7,951 18
From endowments, investments, etc.	471 91
From subscriptions, donations and bequests from private individuals	13,111 62
From other sources	10,220 03
From Dominion Government	557 07
Total	$180,292 88

Expenditures.

Butchers' meat	$20,419 49
Butter and eggs	13,665 73
Flour, bread and meal	5,880 45
Milk	10,792 64
Tea and coffee	2,057 39
Potatoes and other vegetables	5,848 07
Groceries and provisions not enumerated	10,682 99
Drugs and medicines	4,455 71
Laboratory expenses and medical appliances	322 85
Bank interest and exchange	4,006 60
Bedding, napery and general house furnishings	11,864 02
Brooms, brushes, mops, soap and cleaning appliances	2,118 93
Fuel	18,684 95
Electric light, gas, oil and candles	959 85

TORONTO FREE HOSPITAL FOR CONSUMPTIVES, WESTON.—*Continued.*

Laundry	9,029 22	Repairs, ordinary	8,129 05
Maintenance of plant	25,394 60	Head office expenses	4,236 72
Improving grounds	3,236 59	Medical staff supplies	72 30
Advertising, stationery and postage	1,287 02	Horse expenses	341 16
Ice	521 45	Telephones	659 03
Salaries and wages	51,188 66	General expenses	216 89
Taxes and insurance	674 22	Dispensary and X-ray	2,971 04
Freight and livery	15 77	Total	$220,433 93
Contingencies	203 65		
Outside furnishing	123 34	Government grant for 1917	$47,306 15
Travelling expenses	373 55		

SANATORIA FOR CONSUMPTIVES.

The following institutions having complied with the statutory requirements, are entitled to Government aid at the rate of $3.00 per week for each patient admitted free or for whose maintenance $7.00 per week or less is contributed.

Name of Institution.	Location.	Stay of patients in weeks.	Amount payable for year 1917.
			$ c.
Brant Sanatorium	Brantford	1,005$\frac{1}{7}$	3,015 43
Muskoka Free Hospital for Consumptives	Gravenhurst	11,864	35,592 00
Mountain Sanatorium	Hamilton	6,442$\frac{4}{7}$	19,327 72
Essex Health Association	Kingsville	1,044$\frac{3}{7}$	3,132 86
Queen Alexandra Sanatorium	London	2,886	8,658 00
Royal Sanatorium	Ottawa	3,124$\frac{3}{7}$	9,373 29
Consumptive Sanatorium	St. Catharines	532$\frac{4}{7}$	1,597 72
The Preventorium	Toronto	2,278$\frac{5}{7}$	6,836 15
Toronto Free Hospital for Consumptives.	Weston	15,768$\frac{5}{7}$	47,306 15
Queen Mary Hospital for Children	Weston		
		44,946$\frac{3}{7}$	
Total for 1917			134,839 32
Total for 1916			139,710 48

CITY HOUSES OF REFUGE

The usual information obtained from each Refuge, in respect of sex, and previous residence of the inmates, has been summarized as under:

Sex.

Male	2,063
Female	3,320
	5,383

Former Residence.

Received from cities and towns in which the Refuges are located	4,010
Received from counties in which the Refuges are located	359
Received from other counties in the Province	946
Immigrants and foreigners	68
	5,383

TABLE I.

City Refuges—Table I gives a summary of the operations of each Refuge during the year.

Name of Refuge.	Location.	Number of persons in the Refuges on the 1st of October, 1916.	Number admitted to Refuges during the year.	Total number under lodgment during the year ending 30th Sept., 1917.	Total number discharged during the year.	Number of deaths during the year.	Number of persons remaining in the Refuges on 30th Sept., 1917.
Home for the Friendless	Belleville	7	4	11	.....	2	9
The Widows' Home	Brantford	13	3	16	2	1	13
Home for the Friendless	Chatham	21	18	39	11	7	21
St. Paul's Home for the Aged	Cornwall	64	47	111	32	26	53
House of Providence	Dundas	136	45	181	36	11	134
Elliott Home	Guelph	20	5	25	5	2	18
House of Providence	"	55	29	84	29	9	46
Aged Women's Home	Hamilton	52	2	54	.....	3	51
Hamilton House of Refuge	"	119	42	161	26	23	112
St. Peter's Infirmary	"	13	2	15	2	3	10
Home for Friendless Women and Int.	Kingston	22	30	52	20	8	24
House of Refuge	"	35	35	70	19	8	43
House of Providence	"	163	53	216	30	25	161
Aged People's Home	London	91	29	120	5	16	99
House of Providence	"	145	68	213	45	18	150
London Convalescent Home	"	4	16	20	16	.....	4
Victoria Home for Incurables	"	54	22	76	4	19	53
Monas. of Our Lady of Charity Refuge	Ottawa	162	125	287	115	.....	172
Ottawa Home for Friendless Women	"	35	100	135	98	.....	37
The Perley Home for Incurables	"	39	15	54	3	11	40
Protestant Home for the Aged	"	27	10	37	6	5	26
Protestant Orphans' Home, Ref. Br.	"	19	8	27	7	4	16
St. Charles' Hospice	"	211	88	299	38	45	216
St. Patrick's Asylum, Refuge Branch	"	133	41	174	38	18	118
Peterborough Protestant Home	Peterboro'	30	8	38	9	3	26
St. Joseph's House of Providence	"	68	31	99	20	5	74
Thomas Williams Home	St. Thomas	22	3	25	3	2	20
District of Algoma House of Refuge	S. Ste. Marie	39	21	60	12	8	40
Aged Men's Home	Toronto	43	17	60	6	10	44
Aged Women's Home	"	100	23	123	10	4	109
The Church Home for the Aged	"	22	6	28	4	3	21
Good Shepherd Female Refuge	"	136	43	179	41	2	136
The Haven and Prison Gate Mission	"	103	183	286	171	7	108
Hillcrest Convalescent Home	"	28	188	216	189	3	24
Toronto House of Industry	"	133	69	202	57	34	111
House of Providence	"	416	214	630	211	57	362
Humewood House Association	"	18	53	71	46	2	23
Industrial Refuge	"	92	8	100	15	.....	85
Julia Greenshields Home	"	29	5	34	5	1	28
Salvation Army Rescue Home	"	60	177	237	162	13	62
Toronto Hospital for Incurables	"	222	102	324	17	74	233
Victor Home for Young Women	"	27	125	152	114	1	37
Home for the Friendless	Windsor	28	14	42	8	2	32
Totals for 1917	.....	3,256	2,127	5,383	1,687	495	3,201
Totals for 1916	.....	3,442	2,717	6,159	2,360	523	3,276

TABLE II.

City Refuges—Shows the aggregate stay of inmates, upon which the amount of aid to be granted by the Government to each Refuge is based. The average stay per inmate is also given.

Name of Refuge.	Location.	Number of inmates during the year.	Total stay in days during the year.	Average stay per inmate in days.
Home for the Friendless	Belleville	11	2,987	272
The Widows' Home	Brantford	16	4,830	302
Home for the Friendless	Chatham	39	9,385	241
St. Paul's Home for the Aged	Cornwall	111	21,225	191
House of Providence	Dundas	181	52,591	291
Elliott Home	Guelph	25	7,421	297
House of Providence	"	84	19,241	229
Aged Women's Home	Hamilton	54	18,666	346
Hamilton House of Refuge	"	161	43,056	267
St. Peter's Infirmary	"	15	3,880	259
Home for Friendless Women and Inf.	Kingston	52	10,186	196
House of Refuge	"	70	15,019	215
House of Providence	"	216	63,096	292
Aged People's Home	London	120	33,511	279
House of Providence	"	213	55,211	259
London Convalescent Home	"	20	1,247	62
Victoria Home for Incurables	"	76	19,182	252
Monas. of Our Lady of Charity Refuge	Ottawa	287	59,461	207
Ottawa Home for Friendless Women	"	135	12,749	94
The Perley Home for Incurables	"	54	14,813	27
Protestant Home for the Aged	"	37	10,299	278
Protestant Orphans' Home, Ref. Br.	"	27	6,197	230
St. Charles' Hospice	"	299	79,482	266
St. Patrick's Asylum, Refuge Branch	"	174	46,676	268
Peterborough Protestant Home	Peterborough	38	11,141	293
St. Joseph's House of Providence	"	99	25,868	261
Thomas Williams' Home	St. Thomas	25	7,072	253
District of Algoma House of Refuge	Sault Ste. Marie	60	15,649	261
Aged Men's Home	Toronto	60	16,754	279
Aged Women's Home	"	123	38,064	309
The Church Home for the Aged	"	28	8,240	294
Good Shepherd Female Refuge	"	179	47,716	267
The Haven and Prison Gate Mission	"	286	37,259	130
Hillcrest Convalescent Home	"	216	8,569	38
Toronto House of Industry	"	202	45,655	226
House of Providence	"	630	141,395	224
Humewood House Association	"	71	7,181	101
Industrial Refuge	"	100	32,543	325
Julia Greenshields Home	"	34	10,975	323
Salvation Army Rescue Home	"	237	24,234	102
Toronto Hospital for Incurables	"	324	81,083	250
Victor Home for Young Women	"	152	7,723	51
Home for the Friendless	Windsor	42	10,681	254
Totals for 1917		5,383	1,188,213	221
Totals for 1916		6,159	1,249,527	202

TABLE III.

Showing the cost of maintaining the Refuge.

Name of Refuge.	Location.	Aggregate stay of inmates.	Cost of dietaries	Expenditure for fuel, salaries and wages, and all general expenses.	Total expenditure exclusive of extraordinary expense.	Average cost per inmate per day.
			$ c.	$ c.	$ c.	cents
Home for the Friendless	Belleville	2,987	320 47	529 53	850 00	0.28
The Widows' Home	Brantford	4,830	1,179 57	2,250 91	3,430 48	0.71
Home for the Friendless	Chatham	9,385	1,937 15	2,851 15	4,788 30	0.51
St. Paul's Home for the Aged	Cornwall	21,225	4,496 81	2,702 31	7,199 12	0.34
House of Providence	Dundas	52,591	13,004 56	6,202 96	19,207 52	0.37
Elliott Home	Guelph	7,421	2,425 40	3,922 47	6,347 87	0.86
House of Providence	"	19,241	3,577 70	5,004 08	8,581 78	0.45
Aged Women's Home	Hamilton	18,666	3,695 78	4,318 66	8,014 44	0.43
Hamilton House of Refuge	"	43,056	9,507 06	10,852 54	20,359 60	0.47
St. Peter's Infirmary	"	3,880	839 18	2,338 45	3,177 63	0.82
Home for Friendless Women and Inf.	Kingston	10,186	1,244 69	2,002 32	3,247 01	0.32
House of Refuge	"	15,019	2,939 29	5,156 55	8,085 84	0.54
House of Providence	"	63,096	19,190 58	14,678 82	33,869 40	0.54
Aged People's Home	London	33,511	7,493 26	7,122 93	14,616 19	0.44
House of Providence	"	55,211	9,957 86	5,272 26	15,230 12	0.28
London Convalescent Home	"	1,247	327 53	466 86	794 39	0.64
Victoria Home for Incurables	"	19,182	6,022 25	8,578 78	14,601 03	0.76
Monas. of Our Lady of Charity Refuge	Ottawa	59,461	15,659 46	23,174 48	38,833 94	0.65
Ottawa Home for Friendless Women	"	12,749	2,517 00	13,452 57	15,969 57	1.25
The Perley Home for Incurables	"	14,813	3,760 90	8,071 22	11,832 12	0.80
Protestant Home for the Aged	"	10,299	2,093 75	5,721 02	7,814 77	0.76
Protestant Orphans' Home, Refuge Br.	"	6,197	.....	.....	.....	.....
St. Charles' Hospice	"	79,482	18,904 86	8,003 31	26,908 17	0.34
St. Patrick's Asylum, Refuge Branch	"	46,676	9,872 44	25,183 18	35,055 62	0.75
Peterborough Protestant Home	Peterboro'	11,141	2,105 96	3,774 72	5,880 68	0.53
St. Joseph's House of Providence	"	25,868	3,968 13	3,425 88	7,394 01	0.29
Thomas Williams Home	St. Thomas	7,072	1,357 22	1,902 65	3,259 87	0.46
District of Algoma House of Refuge	S. Ste. Marie	15,649	2,508 98	6,375 61	8,884 59	0.57
Aged Men's Home	Toronto	16,754	4,116 37	5,694 86	9,811 23	0.59
Aged Women's Home	"	38,064	9,256 02	13,034 49	22,290 51	0.59
The Church Home for the Aged	"	8,240	2,940 14	2,138 97	5,079 11	0.62
Good Shepherd Female Refuge	"	47,716	10,818 92	6,476 30	17,295 22	0.36
The Haven and Prison Gate Mission	"	37,259	6,636 68	11,306 31	17,942 99	0.48
Hillcrest Convalescent Home	"	8,569	4,718 05	5,424 65	10,142 70	1.18
Toronto House of Industry	"	45,655	8,486 30	8,207 64	16,693 94	0.37
House of Providence	"	141,395	36,522 75	25,492 40	62,015 15	0.44
Humewood House Association	"	7,181	1,544 44	4,013 21	5,557 65	0.77
Industrial Refuge	"	32,543	7,159 94	16,479 06	23,639 00	0.73
Julia Greenshields Home	"	10,975	3,555 08	4,294 18	7,849 26	0.72
Salvation Army Rescue Home	"	24,234	1,517 28	5,730 63	7,247 91	0.30
Toronto Hospital for Incurables	"	81,083	30,705 36	48,026 00	78,731 36	0.97
Victor Home for Young Women	"	7,723	1,641 35	4,152 69	5,794 04	0.75
Home for the Friendless	Windsor	10,681	2,573 35	1,491 75	4,065 10	0.38
Totals for 1917		1,188,213	283,089 87	345,299 36	628,389 23	0.53
Totals for 1916		1,249,527	250,864 83	350,883 08	601,747 91	0.48

TABLE IV.

City Refuges—Shows the basis upon which statutory aid is granted.

Name of Refuge.	Location.	Collective days' stay upon which computation of Refuge rate is based, exclusive of infants under one year old.	Collective days' stay upon which computation of Orphanage rate is based, exclusive of infants under one year old.	Amount received from all sources other than Government.	Computation at seven (7) cents per day.	Computation at two (2) cents per day.	Total Government allowance to each House of Refuge for the year 1917.
				$ c.	$ c.		$ c.
Home for the Friendless.....	Belleville...	2,987	.....	537 12	209 09	.....	209 09
The Widows' Home	Brantford..	4,830	.....	3,122 53	338 10	.....	338 10
Home for the Friendless.....	Chatham...	9,385	.....	3,979 07	656 95	.....	656 95
St. Paul's Home for the Aged...	Cornwall...	21,225	.....	5,396 42	1,485 75	.....	1,485 75
House of Providence	Dundas.....	52,591	.....	14,947 58	3,681 37	.....	3,681 37
Elliott Home	Guelph.....	7,421	.....	5,365 96	519 47	.....	519 47
House of Providence	"	19,241	.....	7,503 13	1,346 87	.....	1,346 87
Aged Women's Home	Hamilton...	18,666	.....	6,584 06	1,306 62	.....	1,306 62
Hamilton House of Refuge....	" ...	43,056	.....	17,130 36	3,013 92	.....	3,013 92
St. Peter's Infirmary	" ...	3,880	.....	3,079 99	271 60	.....	271 60
Home for Friendless Wom.&Inf.	Kingston...	1,857	5,477	2,948 24	129 99	109 54	239 53
House of Refuge	"	15,019	.....	6,925 71	1,051 33	.....	1,051 33
House of Providence	"	63,096	.....	29,367 66	4,416 72	.....	4,416 72
Aged People's Home	London.....	33,511	.....	11,281 11	2,345 77	.....	2,345 77
House of Providence	"	55,211	.....	11,564 14	3,864 77	.....	3,864 77
London Convalescent Home ..	"	1,247	.....	975 63	87 29	.....	87 29
Victoria Home for Incurables.	"	19,182	.....	12,976 99	1,342 74	.....	1,342 74
Mon. of Our Lady of Char. Ref..	Ottawa.....	49,597	9,864	23,888 50	3,471 79	197 28	3,669 07
Ottawa Home Friendless Wom..	"	9,395	1,495	15,585 67	657 65	29 90	687 55
The Perley Home for Incurables	"	14,813	.....	10,548 42	1,036 91	.....	1,036 91
Protestant Home for the Aged..	"	10,299	.....	5,153 30	720 93	.....	720 93
Protestant Orphans' Home, Ref.	"	6,197	.....	.....	433 79	.....	433 79
St. Charles' Hospice	"	79,482	.....	21,300 40	5,563 74	.....	5,563 74
St. Patrick's Asylum, Ref. Br...	"	46,676	.....	25,739 86	3,267 32	.....	3,267 32
Peterborough Protestant Home.	Peterboro'..	11,141	.....	4,989 38	779 87	.....	779 87
St. Joseph's H'se of Providence.	" ...	25,868	.....	4,879 17	1,810 76	.....	1,810 76
Thomas Williams Home	St. Thomas.	7,072	.....	2,782 21	495 04	.....	495 04
Dist. of Algoma House of Ref	S. Ste. Marie	15,649	.....	9,597 46	1,095 43	.....	1,095 43
Aged Men's Home	Toronto....	16,754	.....	9,114 38	1,172 78	.....	1,172 78
Aged Women's Home	"	22,284	.....	18,007 10	1,559 88	.....	1,559 88
The Church Home for the Aged.	"	8,240	.....	4,255 10	576 80	.....	576 80
Good Shepherd Female Refuge.	"	47,716	.....	13,050 00	3,340 12	.....	3,340 12
The Haven & Prison Gate Miss'n	"	27,234	7,368	15,243 08	1,906 38	147 36	2,053 74
Hillcrest Convalescent Home..	"	1,551	.....	9,935 85	108 57	.....	108 57
Toronto House of Industry...	"	45,655	.....	29,720 95	3,195 85	.....	3,195 85
House of Providence	"	141,395	.....	53,113 85	9,897 65	.....	9,897 65
Humewood House Association.	"	3,686	262	5,482 34	258 02	5 24	263 26
Industrial Refuge	"	32,543	.....	20,268 21	2,278 01	.....	2,278 01
Julia Greenshields Home	"	10,975	.....	6,990 50	768 25	.....	768 25
Salvation Army Rescue Home..	"	14,779	590	6,829 53	1,034 53	11 80	1,046 33
Toronto Hospital for Incurables	"	81,083	.....	58,061 53	.....	.....	9,973 48
Victor Home for Young Women.	"	4,840	267	5,524 66	338 80	5 34	344 14
Home for the Friendless.....	Windsor....	10,681	.....	3,169 88	747 67	.....	747 67
Totals for 1917.....	.....	1,118,010	25,323	526,917 03	72,584 89	506 46	83,064 83
Totals for 1916.....	.....	1,180,271	21,812	558,431 30	76,285 09	436 24	88,022 90

SEPARATE REPORT

THE HOME FOR THE FRIENDLESS, BELLEVILLE.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	7
Admitted	4
Total number of inmates.	11
Discharged	.....
Died	2
In residence, 30th September, 1917	9
	11

Places Admitted From.

City of Belleville	11
	11

Sex.

Male	5
Female	6
	11

Receipts.

From the Province of Ontario	$222 88
From the City of Belleville..	300 00
From inmates	.....
Subscriptions and donations..	112 97
From other sources	214 15
Total	$850 00

Expenditures.

Food of all kinds	$320 47
Clothing and furnishings	22 51
Fuel, light and cleaning	167 61
Salaries and wages	278 88
Repairs, ordinary	8 91
Other expenses	51 62
Total	$850 00
Government aid for 1917	$209 09

THE WIDOWS' HOME, BRANTFORD.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	13
Admitted	3
Total number of inmates.	16
Discharged	2
Died	1
In residence, 30th September, 1917	13
	16

Places Admitted From.

City of Brantford	16
County of Brant	.....
Other counties in Ontario	.....
	16

Sex.

Female	16
	16

Receipts.

From the Province of Ontario	$324 02
From inmates	382 00
Subscriptions and donations	2,438 08
From other sources	302 45
Total	$3,446 56

Expenditures.

Food of all kinds	$1,179 57
Clothing and furnishings	40 92
Fuel, light, cleaning, etc.	317 11
Salaries and wages	488 20
Repairs, ordinary, etc.	43 47
Other expenses	1,361 21
Total	$3,430 48
Government aid for 1917	$338 10

THE HOME FOR THE FRIENDLESS, CHATHAM.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	21
Admitted	18
Total number of inmates.	39
Discharged	11
Died	7
In residence, 30th September, 1917	21
	39

Places Admitted From.

City of Chatham	39
County of Kent	.....
Other counties in Ontario	.....
Immigrants, foreigners, etc.	.....
	39

Sex.

Male	26
Female	13
	39

Receipts.

From the Province of Ontario	$701 40
From the City of Chatham	2,880 12
From inmates themselves	748 24
Subscriptions and donations of private individuals	148 48
Other sources	202 23
Total	$4,680 47

Expenditures.

Food of all kinds	$1,937 15
Clothing and furnishings	170 81
Fuel, light, cleaning, etc.	321 61
Salaries and wages	1,003 37
Repairs	211 08
Other expenses	1,144 28
Total	$4,788 30
Government aid for 1917	$656 95

ST. PAUL'S HOME FOR THE AGED, CORNWALL.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	64
Admitted	47
Total number of inmates..	111
Discharged	32
Died	26
In residence, 30th September, 1917	53
	111

Places Admitted From.

Town of Cornwall	25
County of Stormont	31
Other counties	55
Immigrants	.....
	111

Sex.

Male	69
Female	42
	111

Receipts.

From the Province of Ontario	$1,825 08
From the Town of Cornwall	.....
From other municipalities	225 00
From inmates themselves	1,099 71
Subscriptions, donations and bequests of private individuals	2,724 27
From other sources	1,347 44
Total	$7,221 50

Expenditures.

Food of all kinds	$4,496 81
Clothing and furnishings	88 16
Fuel, light, cleaning, etc.	1,255 31
Repairs, ordinary	410 81
Medicine and medical comforts	86 25
Other expenses	861 78
Total	$7,199 12
Government aid for 1917	$1,485 75

HOUSE OF PROVIDENCE, DUNDAS.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Patients.

In residence, 1st October, 1916	136
Admitted	45
Total number of inmates.	181
Discharged	36
Died	11
In residence, 30th September, 1917	134
	181

Places Admitted From.

City of Hamilton	90
County of Wentworth	13
Other counties in Ontario	73
Immigrants, foreigners, etc.	5
	181

Sex.

Male	68
Female	113
	181

Receipts.

From the Province of Ontario.	$3,665 90
From the Town of Dundas	292 00
From the County of Wentworth	.....
From other municipalities	1,798 55
From inmates	7,262 59
Income from property	195 00
Subscriptions and donations of private individuals	4,046 09
Other sources	1,353 35
Total	$18,613 48

Expenditures.

Food of all kinds	$13,004 56
Clothing, furniture and furnishings	1,889 55
Fuel, light and cleaning	2,235 31
Salaries	803 98
Repairs, ordinary	18 75
Other expenditures	547 27
Medicine and medical comforts	418 10
Taxes and insurance	290 00
Total	$19,207 52
Government aid for 1917	$3,681 37

THE ELLIOTT HOME, GUELPH.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	20
Admitted	5
Total number of inmates.	25
Discharged	5
Died	2
In residence, 30th September, 1917	18
	25

Places Admitted From.

City of Guelph	8
County of Wellington	8
Other counties in Ontario	9
Immigrants, foreigners, etc.	.....
	25

Sex.

Male	11
Female	14
	25

Receipts.

From the Province of Ontario	$525 28
From the City of Guelph	.....
From the County of Wellington	.....
Payments from inmates	4,736 23
Subscriptions and donations	9 00
From other sources	620 73
Bank overdraft	768 04
Total	$6.659 28

Expenditures.

Food of all kinds	$2,425 40
Clothing, furniture and furnishings	99 07
Fuel, gas, etc.	1,260 33
Salaries and wages	1,990 26
Repairs, ordinary	178 26
Other expenses	390 40
Medicine and medical comforts	4 15
Repairs, additions	.....
Bank overdraft, 1916	311 41
Total	$6,659 28
Government aid for 1917	$519 47

HOUSE OF PROVIDENCE, GUELPH.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	55
Admitted	29
Total number of inmates..	84
Discharged	29
Died	9
In residence, 30th September, 1917	46
	84

Places Admitted From.

From the City of Guelph	35
From the County of Wellington	34
Other counties in Ontario	15
Foreigners, etc.	.....
	84

Sex.

Male	45
Female	39
	84

Receipts.

From the Province of Ontario	$1,300 74
From the City of Guelph	2,462 50
From inmates	862 48
From the County of Wellington	200 00
Subscriptions, donations and bequests	1,021 80
From other sources	2,956 35
Total	$8,803 87

Expenditures.

Food of all kinds	$3,577 70
Clothing and furnishings	741 58
Fuel, light and cleaning	1,412 26
Salaries and wages	710 50
Ordinary repairs	366 24
Live stock and farm grounds	1,066 25
Other expenses	606 75
Medicine and medical comforts	100 50
Total	$8,581 78
Government aid for 1917	$1,346 87

HOME FOR AGED WOMEN, HAMILTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	52
Admitted	2
Total number of inmates..	54
Number discharged	.....
Number of deaths	3
In residence, 30th September, 1917	51
	54

Places Admitted From.

City of Hamilton	54
	54

Sex.

Female	54
	54

Receipts.

From the Government of Ontario	$1,277 36
From the City of Hamilton	1,119 36
Income from property	2,022 64
Subscriptions, donations of private individuals	2,384 29
From inmates	.....
From all other sources	1,057 77
Total	$7,861 42

Expenditures.

Food of all kinds	$3,695 78
Clothing, furniture, etc.	221 66
Fuel, gas, cleaning, etc.	1,323 69
Salaries and wages	2,374 30
Ordinary repairs	97 32
Other expenses	239 01
Outdoor relief	.....
Medicine and medical comforts	62 68
Total	$8,014 44
Government aid for 1917	$1,306 62

HOUSE OF REFUGE, HAMILTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	119
Admitted	42
Total number of inmates.	161
Discharged	26
Died	23
In residence, 30th September, 1917	112
	161

Places Admitted From.

City of Hamilton	161
County of Wentworth	.....
	161

Sex.

Male	96
Female	65
	161

Receipts.

From the Government of Ontario	$3,229 24
From the City of Hamilton	16,937 66
From the municipalities	.....
From the inmates	191 50
Subscriptions, donations of private individuals	.....
From all other sources	1 20
Total	$20,359 60

Expenditures.

Food of all kinds	$9,507 06
Clothing, furnishings, etc.	673 98
Fuel, light, cleaning, etc.	2,737 60
Salaries and wages	5,892 00
Repairs	780 17
Taxes and insurance	122 30
Other expenses	524 48
Medicine and medical comforts	122 01
Total	$20,359 60
Government aid for 1917	$3,013 92

ST. PETER'S HOME, HAMILTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	13
Admitted	2
Total number of inmates.	15
Discharged	2
Died	3
In residence, 30th September, 1917	10
	15

Places Admitted From.

City of Hamilton	14
County of Wentworth and other counties	1
Immigrants, foreigners, etc.	.....
	15

Sex.

Male	15
Female	.....
	15

Receipts.

From the Ontario Government	$317 80
From the City of Hamilton	159 52
From the County of Wentworth	.....
From inmates	1,894 00
From subscriptions, donations, etc.	218 00
From other sources	704 47
Income from property belonging to House	104 00
Total	$3,397 79

Expenditures.

Food of all kinds	$839 18
Clothing, furnishings, etc.	77 60
Fuel, light and cleaning	258 26
Salaries and wages	946 00
Ordinary repairs	241 81
Livestock and feed	22 28
Other expenses	789 55
Medicine and medical comforts	2 95
Total	$3,177 63
Government aid for 1917	$271 60

HOME FOR FRIENDLESS WOMEN AND INFANTS, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	22
Admitted	30
Total number of inmates	52
Discharged	20
Died	8
In residence, 30th September, 1917	24
	52

Places Admitted From.

City of Kingston	16
County of Frontenac	14
Other counties in Ontario	22
Immigrants, foreigners, etc.	.....
	52

Sex.

Male	22
Female	30
	52

Receipts.

From the Province of Ontario	$290 62
From the City of Kingston	500 00
From the County of Frontenac	200 00
From inmates	1,161 25
Subscriptions and donations	1,069 57
Other sources	17 42
Total	$3,238 86

Expenditures.

Food of all kinds	$1,244 69
Clothing and furnishings	197 45
Fuel, light and cleaning, etc.	413 50
Salaries and wages	540 00
Repairs	294 94
Additions	.....
Other expenses	556 43
Total	$3,247 01
Government aid for 1917	$239 53

HOUSE OF REFUGE, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	35
Admitted	35
	70
Discharged	19
Died	8
In residence, 30th September, 1917	43
	70

Places Admitted From.

City of Kingston	22
County of Frontenac	24
Other counties of Ontario	24
Immigrants, foreigners, etc.	.....
	70

Sex.

Male	49
Female	21
	70

Receipts.

From the Province of Ontario	$1,048 81
From the City of Kingston	1,000 00
County of Frontenac	2,073 78
Lennox and Addington	1,838 93
Payments from inmates	241 62
Income from property	517 45
Subscriptions and donations	666 64
Other sources	587 29
Total	$7,974 52

Expenditures.

Food of all kinds	$2,929 29
Clothing, furniture and furnishings	562 70
Fuel, light and cleaning	799 12
Salaries and wages	1,158 25
Repairs, ordinary	883 75
Farming	275 15
Other expenses	519 64
Medicine and medical comforts	29 74
Repairs, additions	210 50
Purchase land	717 70
Total	$8,085 84
Government aid for 1917	$1,051 33

HOUSE OF PROVIDENCE, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	163
Admitted	53
Total number of inmates..	216
Discharged	30
Died	25
In residence, 30th September, 1917	161
	216

Places Admitted From.

City of Kingston	66
County of Frontenac	15
Other counties	125
Immigrants, foreigners, etc...	10
	216

Sex.

Male	104
Female	112
	216

Receipts.

From the Province of Ontario	$4,497 22
From the City of Kingston ..	100 00
From the County of Frontenac	850 67
From other municipalities ..	1,453 79
Income from property	522 92
Payment from inmates	10,194 47
Subscriptions and donations.	7,180 33
Interest earnings, etc.	5,858 75
Other sources	3,206 73
Total	$33,864 88

Expenditures.

Food of all kinds	$19,190 58
Clothing, furnishing, etc.	3,259 01
Salaries and wages	52 00
Fuel, light and cleaning	5,853 21
Repairs, ordinary	2,099 16
Taxes and insurance	1,142 64
Other expenses	2,022 20
Medicine and medical comforts	250 60
Repairs, additions	.....
Total	$33,869 40
Government aid for 1917	$4,416 72

HOME FOR AGED PEOPLE, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	91
Admitted	29
Total number of inmates.	120
Discharged	5
Died	16
In residence, 30th September, 1917	99
	120

Places Admitted From.

City of London	93
Other counties of Ontario ...	15
County of Middlesex	10
Immigrants, foreigners, etc...	.....
	120

Sex.

Male	48
Female	72
	120

Receipts.

From the Province of Ontario	$2,608 76
From the City of London ...	3,409 20
From the County of Middlesex	.....
From other municipalities ..	.....
Payment from inmates	6,535 00
Subscriptions and donations .	150 33
Other sources	1,186 58
Total	$13,889 87

Expenditures.

Food of all kinds	$7,493 26
Clothing, furniture and furnishings	765 76
Fuel, light and cleaning	1,788 23
Salaries and wages	3,376 86
Repairs, ordinary	687 22
Drugs and medicines	98 43
Other expenses	406 43
Total	$14,616 19
Government aid for 1917	$2,345 77

HOUSE OF PROVIDENCE, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	145
Admitted	68
Total number of inmates.	213
Discharged	45
Died	18
In residence, 30th September, 1917	150
	213

Places Admitted From.

City of London	47
County of Middlesex	12
Other counties in Ontario	154
Immigrants, foreigners, etc.	.....
	213

Sex.

Male	92
Female	121
	213

Receipts.

From the Province of Ontario	$3,733 87
From the City of London	250 00
From other municipalities	624 00
Payment from inmates	6,237 99
Subscriptions and donations	4,452 15
Other sources	.....
Total	$15,298 01

Expenditures.

Food of all kinds	$9,957 86
Clothing, furniture and furnishings	836 34
Fuel, light and cleaning	2,635 85
Salaries and wages	761 00
Repairs, ordinary	429 09
Taxes, insurance, etc.	379 88
Other expenses	151 88
Medicine and medical comforts	78 22
Total	$15,230 12
Government aid for 1917	$3,864 77

CONVALESCENT HOME, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	4
Admitted	16
Total number of inmates.	20
Discharged	16
Died	.....
In residence, 30th September, 1917	4
	20

Places Admitted From.

City of London	20
County of Middlesex and other counties	.....
	20

Sex.

Male	8
Female	12
	20

Receipts.

From the Province of Ontario	$97 72
From the City of London	150 00
Payment from inmates	104 30
Subscriptions and donations	694 75
Other sources	26 58
Total	$1,073 35

Expenditures.

Food of all kinds	$327 53
Clothing, furniture and furnishings	.....
Fuel, light and cleaning	155 31
Salaries and wages	204 00
Repairs, ordinary	30 55
Other expenses	77 00
Total	$794 39
Government aid for 1917	$87 29

HOME FOR INCURABLES, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	54
Admitted	22
Total number of inmates..	76
Discharged	4
Died	19
In residence, 30th September, 1917	53
	76

Places Admitted From.

City of London	17
County of Middlesex	33
Other counties in Ontario	23
Immigrants, etc.	3
	76

Sex.

Male	37
Female	39
	76

Receipts.

From the Province of Ontario	$1,333 29
From the City of London	1,012 35
From the County of Middlesex	.....
Payments from inmates	11,064 83
Subscriptions, donations, etc..	343 00
Other sources	556 81
Total	$14,310 28

Expenditures.

Food of all kinds	$6,022 25
Clothing and furnishings	1,234 08
Fuel, light and cleaning	1,375 56
Salaries and wages	4,866 24
Repairs	684 14
Other expenses	165 77
Medicine and medical comforts	252 99
Total	$14,601 03
Government aid for 1917	$1,342 74

THE REFUGE OF OUR LADY OF CHARITY, OTTAWA.

The following summaries show the operations of this Refuge during the year:

Movements of Inmates.

In residence, 1st October, 1916	162
Admitted	125
Total number of inmates.	287
Discharged	115
Died	.....
In residence, 30th September, 1917	172
	287

Places Admitted From.

City of Ottawa	234
County of Carleton	12
Other counties in Ontario	26
Immigrants, foreigners, etc.	15
	287

Sex.

Female	287
	287

Receipts.

From the Government of Ontario	$3,952 72
From the City of Ottawa	425 00
County of Carleton	50 00
From payments made by inmates	2,800 25
Subscriptions, donations, etc..	795 40
Other sources	19,769 85
Income from Home property.	48 00
Total	$27,841 22

Expenditures.

Food of all kinds	$15,659 46
Clothing and furnishings	5,570 61
Fuel, light, cleaning, etc.	8,097 75
Salaries and wages	925 20
Repairs	975 15
Live stock and farm grounds	3,621 93
Taxes and insurance	1,658 75
Medicine and medical comforts	778 29
Repairs, additions	630 40
Other expenses	916 40
Total	$38,833 94
Government aid for 1917	$3,669 07

THE HOME FOR FRIENDLESS WOMEN, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	35
Admitted	100
Total number of inmates.	135
Discharged	98
Died	.....
In residence, 30th September, 1917	37
	135

Places Admitted From.

City of Ottawa	93
County of Carleton	2
Other counties in Ontario	26
Immigrants, etc.	14
	135

Sex.

Male	26
Female	109
	135

Receipts.

From the Province of Ontario	$677 76
From the City of Ottawa	500 00
From the County of Carleton	50 00
Payment from inmates	.....
Subscriptions and donations	257 27
From all other sources	14,778 40
Total	$16,263 43

Expenditures.

Food of all kinds	$2,517 00
Clothing, furniture and furnishings	467 02
Fuel, light and cleaning	1,597 64
Salaries and wages	6,706 24
Repairs, ordinary	193 21
Taxes and insurance	305 01
Medicine and medical comforts	280 20
Repairs, additions	290 06
Other expenses	3,613 19
Total	$15,969 57
Government aid for 1917	$687 55

THE PERLEY HOME FOR INCURABLES, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	39
Admitted	15
Total number of inmates.	54
Discharged	3
Died	11
In residence. 30th September, 1917	40
	54

Places Admitted From.

City of Ottawa	50
County of Carleton	1
Other counties in Ontario	2
Immigrants, foreigners, etc.	1
	54

Sex.

Male	18
Female	36
	54

Receipts.

From the Government of Ontario	$888 37
From the County of Carleton.	.....
From the City of Ottawa	2,000 00
From payments made by inmates	4,061 50
Subscriptions, donations, etc.	3,315 00
Other sources	3,643 80
Income from Home property	1,171 92
Bank overdraft	2,838 77
Total	$17,919 36

Expenditures.

Food of all kinds	$3,760 90
Clothing, furniture and furnishings	.....
Fuel, light and cleaning	1,557 01
Salaries and wages	4,232 04
Repairs	999 39
Taxes and insurance	174 96
Other expenses	868 40
Medicine and medical comforts	239 42
Bank overdraft, 1916	6,087 24
Total	$17,919 36
Government aid for 1917	$1,036 91

HOME FOR THE AGED, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, October 1st, 1916	27
Admitted	10
Total number of inmates..	37
Discharged	6
Died	5
In residence, 30th September, 1917	26
	37

Places Admitted From.

City of Ottawa	33
County of Carleton	3
Other Counties	1
Immigrants, foreigners	.....
	37

Sex.

Male	36
Female	1
	37

Receipts.

From the Government of Ontario	$756 56
From the City of Ottawa	1,000 00
From the County of Carleton	300 00
From other municipalities	.....
From payments made by inmates	754 97
Subscriptions, donations, etc..	2,197 84
Income from property	.....
Other sources	900 49
Total	$5,909 86

Expenditures.

Food of all kinds	$2,093 75
Clothing and furnishings	.....
Fuel, light, cleaning, etc.	128 81
Salaries and wages, etc.	1,510 00
Repairs	190 40
Taxes and insurance	156 87
Other expenses	3,688 94
Medicine and medical comforts	46 00
Total	$7,814 77
Government aid for 1917	$720 93

REFUGE BRANCH, ORPHANS' HOME, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	19
Admitted	8
Total number of inmates.	27
Discharged	7
Died	4
In residence, 30th September, 1917	16
	27

Places Admitted From.

City of Ottawa	23
County of Carleton	3
Other counties in Ontario	1
Immigrants, etc.	.....
	27

Sex.

Female	27
	27

Receipts.

From the Province of Ontario	$888 12
From the City of Ottawa	1,125 00
From the County of Carleton	300 00
Payment from inmates	1,508 00
Income from property	1,128 07
Subscriptions and donations, etc.	5,923 96
Total	$10,873 15

Expenditures.

Food of all kinds	$3,262 79
Clothing, furniture and furnishings	717 87
Fuel, light and cleaning	1,479 23
Salaries and wages	2,766 33
Taxes and insurance	571 98
Repairs, ordinary	458 95
Medicine, medical comforts	43 95
Repairs, additions	.....
Other expenses	267 33
Total	$9,568 43
Government aid for 1917	$433 79

ST. CHARLES' HOSPICE, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	211
Admitted	88
Total number of inmates..	299
Discharged	38
Died	45
In residence, 30th September, 1917	216
	299

Places Admitted From.

City of Ottawa	230
County of Carleton	5
Other counties	62
Immigrants, foreigners, etc...	2
	299

Sex.

Male	120
Female	179
	299

Receipts.

From the Government of Ontario	$5,642 49
From the City of Ottawa	2,800 00
From the County of Carleton.	50 00
From other municipalities	2,787 20
Income from property belonging to the House	992 50
From payments made by inmates	6,980 40
Subscriptions, donations, etc..	4,940 10
Other sources	2,750 20
Total	$26,942 89

Expenditures.

Food of all kinds	$18,904 86
Clothing and furnishings	1,428 40
Fuel, light, cleaning, etc.	3,072 54
Salaries and wages	645 00
Repairs	1,597 20
Taxes and insurance	364 00
Other expenses	630 00
Medicine and medical comforts	266 17
Total	$26,908 17
Government aid for 1917	$5,563 74

ST. PATRICK'S REFUGE, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	133
Admitted	41
Total number of inmates..	174
Discharged	38
Died	18
In residence, 30th September, 1917	118
	174

Places Admitted From.

City of Ottawa	103
County of Carleton	27
Other counties in Ontario	41
Immigrants, etc.	3
	174

Sex.

Male	68
Female	106
	174

Receipts.

From the Government of Ontario	$4,082 19
From the City of Ottawa	1,850 00
From the County of Carleton.	50 00
From other municipalites	.....
From payments made by inmates	6,046 74
Subscriptions, donations, etc..	14,356 25
Other sources	3,436 87
Total	$29,822 05

Expenditures.

Food of all kinds	$9,872 44
Clothing and furnishings	1,010 77
Fuel, light, cleaning, etc.	5,059 84
Salaries and wages	2,007 85
Repairs, ordinary	1,652 59
Additions	11,296 44
Live stock and farm grounds.	1,387 00
Taxes and insurance	990 51
Medicine and medical comforts	176 09
Other expenses	1,602 09
Total	$35,055 62
Government aid for 1917	$3,267 32

THE PETERBOROUGH PROTESTANT HOME.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	30
Admitted	8
Total number of inmates.	38
Discharged	9
Died	3
In residence, 30th September, 1917	26
	38

Places Admitted From.

City of Peterborough	38
County of Peterborough	.....
	38

Sex.

Male	21
Female	17
	38

Receipts.

From the Province of Ontario	$702 87
From the City of Peterborough	2,001 37
From inmates themselves	1,705 46
Income from property belonging to the Home	146 80
Subscriptions, donations from private individuals	45 75
From all sources not above mentioned	1,090 00
Total	$5,692 25

Expenditures.

Food of all kinds	$2,105 96
Clothing and furnishings	255 26
Fuel light and cleaning	771 54
Repairs, ordinary	103 79
Salaries and wages	1,977 83
Other expenses	620 35
Medicine and medical comforts	45 95
Total	$5,880 68
Government grant for 1917	$779 87

THE HOUSE OF PROVIDENCE, PETERBOROUGH.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	68
Admitted	31
Total number of inmates.	99
Discharged	20
Died	5
In residence, 30th September, 1917	74
	99

Places Admitted From.

City of Peterborough	46
County of Peterborough	20
From other counties	33
Immigrants, foreigners, etc.	.....
	99

Sex.

Male	39
Female	60
	99

Receipts.

From the Province of Ontario	$1,888 81
From the City and County of Peterborough	279 35
From municipalities for board of inmates	.....
From inmates	1,640 42
Subscriptions and donations	1,067 00
Other sources	1,892 40
Total	$6,767 98

Expenditures.

Food of all kinds	$3,968 13
Clothing and furnishings	919 93
Fuel, light and cleaning	1,207 55
Repairs, ordinary	156 28
Other expenses	406 04
Medicine and medical comforts	105 58
Salaries and wages	630 50
Total	$7,394 01
Government aid for 1917	$1,810 76

THE THOMAS WILLIAMS HOME, ST. THOMAS.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	22
Admitted	3
Total number of inmates.	25
Discharged	3
Died	2
In residence, 30th September, 1917	20
	25

Places Admitted From.

City of St. Thomas	25
	25

Sex.

Male	13
Female	12
	25

Receipts.

From the Province of Ontario	$532 07
From the City of St. Thomas.	.....
From payments by inmates ..	.....
Subscriptions, etc.	.....
Income from property	2,777 81
From other sources	4 40
Total	$3,314 28

Expenditures.

Food of all kinds	$1,357 22
Clothing and furnishings	55 71
Fuel, light, cleaning, etc.	579 45
Salaries and wages	921 00
Repairs, ordinary	77 54
Other expenses	174 65
Medicine and medical comforts	94 30
Repairs, additions	.....
Total	$3,259 87
Government aid for 1917	$495 04

HOUSE OF REFUGE, DISTRICT OF ALGOMA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	39
Admitted	21
Total number of inmates.	60
Discharged	12
Died	8
In residence, 30th September, 1917	40
	60

Places Admitted From.

Town of Sault Ste. Marie	25
District of Algoma	29
Other counties	.....
Immigrants	6
	60

Sex.

Male	47
Female	13
	60

Receipts.

From the Province of Ontario	$857 01
From City of Sault Ste. Marie	5,346 60
From inmates themselves	523 37
Subscriptions, donations and bequests of private individuals	.....
From other sources	361 59
From other municipalities	3,365 90
Total	$10,454 47

Expenditures.

Food of all kinds	$2,508 98
Light, fuel, cleaning, etc.	1,273 56
Repairs, ordinary	23 13
Medicine and medical comforts	193 46
Salaries and wages	1,927 50
Clothing and furnishings	508 03
Farming	1,230 75
Repairs, additions	262 93
Bank overdraft	1,099 18
Land purchased	3,817 20
Other expenses	956 25
Total	$13,800 97
Government aid for 1917	$1,095 43

AGED MEN'S HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	43
Admitted	17
Total number of inmates	60
Discharged	6
Died	10
In residence, 30th September, 1917	44
	60

Places Admitted From.

City of Toronto	55
County of York and other counties	1
Immigrants, etc.	4
	60

Sex.

Male	60
	60

Receipts.

From the Government of Ontario	$580 16
From the City of Toronto	300 00
From payments made by inmates	7,236 77
Subscriptions, donations, etc.	1,509 81
Received from all other sources	67 80
Total	$9,694 54

Expenditures.

Food of all kinds	$4,116 37
Clothing and furnishings	390 94
Fuel, light, cleaning, etc.	1,354 51
Salaries and wages	3,134 68
Repairs	405 27
Other expenses	377 22
Medicine and medical comforts	32 24
Total	$9,811 23
Government aid for 1917	$1,172 78

AGED WOMEN'S HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	100
Admitted	23
Total number of inmates	123
Discharged	10
Deaths	4
In residence, 30th September, 1917	109
	123

Places Admitted From.

City of Toronto	114
Other cities and counties	9
Immigrants, foreigners, etc.	.....
	123

Sex.

Female	123
	123

Receipts.

From the Province of Ontario	$1,669 01
From the City of Toronto	500 00
From inmates	15,928 50
Subscriptions and donations	1,472 40
From other sources	106 20
Total	$19,676 11

Expenditures.

Food of all kinds	$9,256 02
Clothing, furnishings, etc.	531 05
Fuel, light, cleaning, etc.	2,971 92
Salaries and wages	5,629 18
Repairs	885 71
Other expenses	2,946 52
Medicine and medical comforts	70 11
Total	$22,290 51
Government aid for 1917	$1,559 88

CHURCH HOME FOR THE AGED, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	22
Admitted	6
Total number of inmates.	28
Discharged	4
Died	3
In residence, 30th September, 1917	21
	28

Places Admitted From.

City of Toronto	25
Other counties of Ontario	1
Immigrants, etc.	2
	28

Sex.

Male	2
Female	26
	28

Receipts.

From the Government of Ontario	$582 89
From the City of Toronto	200 00
From other municipalities	.....
From payments made by inmates	3,366 10
Income from property belonging to the Home	.....
Subscriptions, donations, etc.	689 00
Total	$4,837 99

Expenditures.

Food of all kinds	$2,940 14
Clothing and furnishings	251 22
Fuel, light and cleaning, etc.	474 03
Salaries and wages	983 35
Repairs	250 24
Other expenses	153 82
Medicine and medical comforts	26 31
Total	$5,079 11
Government aid for 1917	$576 80

GOOD SHEPHERD FEMALE REFUGE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	136
Admitted	43
Total number of inmates.	179
Discharged	41
Died	2
In residence, 30th September, 1917	136
	179

Places Admitted From.

City of Toronto	150
County of York and other counties	29
Immigrants and foreigners	.....
	179

Sex.

Female	179
	179

Receipts.

From the Province of Ontario	$3,859 10
From the City of Toronto	700 00
From inmates	.....
Subscriptions and donations.	350 00
From other sources and laundry	12,000 00
Total	$16,909 00

Expenditures.

Food of all kinds	$10,818 92
Clothing, furniture and furnishings	2,555 30
Fuel, light and cleaning	1,785 00
Salaries and wages	350 00
Repairs	250 00
Drugs and medicines	950 00
Other expenditures	586 00
Total	$17,295 22
Government aid for 1917	$3,340 12

THE HAVEN, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	103
Admitted	183
Total number of inmates.	286
Discharged	171
Deaths	7
In residence, 30th September, 1917	108
	286

Places Admitted From.

City of Toronto	219
County of York	5
Other counties	58
Immigrants, etc.	4
	286

Sex.

Male (infants)	58
Female	228
	286

Receipts.

From the Province of Ontario	$2,345 53
From the City of Toronto	1,916 62
From inmates	4,006 35
Income from laundry, etc.	7,205 78
Subscriptions and donations	2,070 85
From other sources	43 48
Total	$17,588 61

Expenditures.

Food of all kinds	$6,636 68
Clothing, furnishings, etc.	966 84
Fuel, light, cleaning, etc.	1,685 25
Salaries and wages	3,583 33
Repairs	2,258 15
Other expenses	2,591 92
Medicine and medical comforts	220 82
Total	$17,942 99
Government aid for 1917	$2,053 74

HILLCREST CONVALESCENT HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	28
Admitted	188
Total number of inmates.	216
Discharged	189
Died	3
In residence, 30th September, 1917	24
	216

Places Admitted From.

City of Toronto	192
County of York	3
Other counties	18
Immigrants, foreigners, etc.	3
	216

Sex.

Male	4
Female	212
	216

Receipts.

From the Province of Ontario	$189 42
From the City of Toronto	729 50
Payments from inmates	9,111 01
Income from property belonging to the Home	.....
Subscriptions and donations.	10 00
Received from all other sources not above enumerated	85 34
Total	$10,125 27

Expenditures.

Food of all kinds	$4,718 05
Furnishings, etc.	482 22
Fuel, light and cleaning	1,259 16
Salaries and wages	2,815 42
Ordinary repairs, etc.	509 83
Other expenses	327 41
Medicine and medical comforts	30 61
Total	$10,142 70
Government aid for 1917	$108 57

HOUSE OF INDUSTRY, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	133
Admitted	69
Total number of inmates.	202
Discharged	57
Died	34
In residence, 30th September, 1917	111
	202

Places Admitted From.

City of Toronto	202
County of York and other counties	.....
Immigrants and foreigners	.....
	202

Sex.

Male	142
Female	60
	202

Receipts.

From the Province of Ontario	$4,168 36
From the City of Toronto	25,000 00
From inmates	748 70
Income from property belonging to the House	1,941 47
Subscriptions and donations.	1,459 50
From City of Toronto for outdoor and casual poor	.....
Bank overdraft	136 41
From other sources	571 28
Total	$34,025 72

Expenditures.

Food of all kinds	$8,486 30
Clothing, furniture and furnishings	642 22
Fuel, light and cleaning	2,432 31
Salaries and wages	2,509 81
Repairs	2,393 19
Outdoor and casual poor	22,490 09
Other expenditures	1,109 86
Medicine and medical comforts	210 10
Advertising and printing	73 29
Taxes and insurance	230 00
Total	$40,577 17
Government aid for 1917	$3,195 85

HOUSE OF PROVIDENCE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	416
Admitted	214
Total number of inmates.	630
Discharged	211
Died	57
In residence, 30th September, 1917	362
	630

Places Admitted From.

City of Toronto	586
County of York	4
Other counties in Ontario	40
Immigrants and foreigners	.....
	630

Sex.

Male	293
Female	337
	630

Receipts.

From the Province of Ontario	$11,890 55
From the City of Toronto	18,000 00
Other municipalities	.....
From inmates, in payment of board	16,535 24
Subscriptions, donations and bequests of private individuals	8,138 92
From other sources	10,439 69
Total	$65,004 40

Expenditures.

Food of all kinds	$36,522 75
Clothing, furniture and furnishings	3,817 81
Fuel, light and cleaning	9,923 56
Salaries and wages	3,932 42
Drugs and medicines	363 02
Ordinary repairs	3,880 06
Other expenditures	3,575 53
Total	$62,015 15
Government aid for 1917	$9,897 65

HUMEWOOD HOUSE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	18
Admitted	53
Total number of inmates.	71
Discharged	46
Deaths	2
In residence, 30th September, 1917	23
	71

Places Admitted From.

City of Toronto	67
County of York	.....
Other counties of Ontario	4
Immigrants, foreigners, etc.	.....
	71

Sex.

Male (infants)	18
Female	53
	71

Receipts.

From the Province of Ontario	$237 91
From inmates	.....
Subscriptions, donations of private individuals	5,482 34
From other sources	.....
Total	$5,720 25

Expenditures.

Food of all kinds	$1,544 44
Clothing, furnishings, etc.	334 01
Fuel, light, cleaning, etc.	340 09
Salaries and wages	1,135 30
Repairs	259 98
Other expenses	1,943 83
Total	$5,557 65
Government aid for 1917	$263 26

INDUSTRIAL REFUGE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	92
Admitted	8
Total number of inmates.	100
Discharged	15
Died	.....
In residence, 30th September, 1917	85
	100

Places Admitted From.

City of Toronto	79
County of York and other counties	21
Immigrants, foreigners, etc.	.....
	100

Sex.

Female	100
	100

Receipts.

From the Province of Ontario	$2,317 07
From the City of Toronto	1,000 00
Payments from inmates	883 70
Subscriptions, donations, etc.	1,325 87
Laundry, sewing, etc.	17,825 53
Other sources	233 11
Total	$23,585 28

Expenditures.

Food of all kinds	$7,159 94
Clothing and furnishings	1,579 89
Fuel, light and cleaning	3,146 54
Salaries and wages	5,508 62
Repairs, ordinary	894 48
Medicine and medical comforts	150 34
Other expenses	5,199 19
Total	$23,639 00
Government aid for 1917	$2,278 01

THE JULIA GREENSHIELDS HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	29
Admitted	5
Total number of inmates.	34
Discharged	5
Died	1
In residence, 30th September, 1917	28
	34

Places Admitted From.

City of Toronto	34
County of York	.....
Other counties	.....
	34

Sex.

Females	34
	34

Receipts.

From the Province of Ontario	$721 35
From the City of Toronto	200 00
Payments of inmates	4,284 16
Income from property belonging to the Home	99 54
Subscriptions, donations	2,406 80
Other sources	.....
Total	$7,711 85

Expenditures.

Food of all kinds	$3,555 08
Clothing and furnishings	213 01
Fuel, light and cleaning	1,163 02
Salaries and wages	1,809 55
Repairs	451 98
Other expenses	630 08
Medicine and medical comforts	26 54
Repairs, additions	.....
Total	$7,849 26
Government aid for 1917	$768 25

S. A. RESCUE HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	60
Admitted	177
Total number of inmates.	237
Discharged	162
Deaths	13
In residence, 30th September, 1917	62
	237

Places Admitted From.

City of Toronto	191
County of York and other counties	46
Immigrants, etc.	.....
	237

Sex.

Male	37
Female	200
	237

Receipts.

From the Province of Ontario	$1,030 83
From the City of Toronto	500 00
From inmates	814 51
Subscriptions and donations.	939 88
From other sources	4,575 14
Total	$7,860 36

Expenditures.

Food of all kinds	$1,517 28
Clothing, furnishings, etc.	206 25
Fuel, light, cleaning, etc.	451 44
Salaries and wages	2,161 50
Repairs	1,234 11
Rent	1,200 00
Drugs and medicines	62 47
Other expenses	414 86
Total	$7,247 91
Government aid for 1917	$1,046 33

TORONTO HOSPITAL FOR INCURABLES.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	222
Admitted	102
Total number of inmates.	324
Discharged	17
Died	74
In residence, 30th September, 1917	233
	324

Places Admitted From.

City of Toronto	293
County of York and other counties	3
Immigrants, foreigners, etc...	28
	324

Sex.

Male	158
Female	166
	324

Receipts.

From the Province of Ontario	$10,344 12
From the City of Toronto ...	32,115 00
From other municipalities ..	.....
Payments from inmates	17,666 02
Income from property belonging to the Home	2,548 94
Subscriptions, donations, etc..	5,630 46
Other sources	101 11
Bank overdraft	9,182 30
Total	$77,587 95

Expenditures.

Food of all kinds	$30,705 36
Clothing and furnishings	3,890 07
Fuel, light and cleaning	12,419 20
Salaries and wages	25,251 77
Repairs, ordinary	2,380 64
Medicine and medical comforts	1,701 58
Other expenses	2,167 74
Repairs and additions	215 00
Total	$78,731 36
Government aid for 1917	$9,973 48

VICTOR HOME FOR YOUNG WOMEN, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	27
Admitted	125
Total number of inmates.	152
Discharged	114
Deaths	1
In residence, 30th September, 1917	37
	152

Places Admitted From.

City of Toronto	125
Immigrants, foreigners, etc. ..	.....
Other counties of Ontario	27
County of York	.....
	152

Sex.

Female	137
Male (infants)	15
	152

Receipts.

From the Province of Ontario	$316 27
From the City of Toronto ...	500 00
From inmates	350 00
Subscriptions, donations of private individuals	2,305 40
From other sources	2,369 26
Total	$5,840 93

Expenditures.

Food of all kinds	$1,641 35
Clothing, furnishings, etc. ...	.....
Fuel, light, cleaning, etc.	577 82
Salaries and wages	1,145 00
Repairs	166 44
Other expenses	2,263 43
Total	$5,794 04
Government aid for 1917	$344 14

HOME FOR THE FRIENDLESS, WINDSOR.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1916	28
Admitted	14
Total number of inmates.	42
Discharged	8
Died	2
In residence, 30th September, 1917	32
	42

Places Admitted From.

City of Windsor	42
County of Essex	.....
Immigrants, foreigners, etc...	.....
	42

Sex.

Male	26
Female	16
	42

Receipts.

From the Province of Ontario	$717 50
From the City of Windsor ..	2,945 85
From inmates	177 75
Subscriptions and donations.	6 42
Other sources	39 86
Total	$3,887 38

Expenditures.

Food of all kinds	$2,573 35
Clothing and furnishings	27 03
Fuel, light and cleaning	251 98
Repairs, ordinary	85 93
Salaries and wages	791 97
Other expenses	334 84
Total	$4,065 10
Government aid for 1917	$747 67

ORPHAN ASYLUMS

The statistical tables on the following pages of this report show an increase in the contributions to several of the Institutions, while in some cases there is a falling off as compared with last year.

The total number of children cared for in the Orphanages during the year was 4,233, as compared with 4,428 in 1916.

In the tables will be found full details of the receiving and discharging of children, etc.

The statistics relating to the sex and previous residence of the inmates are given in the following summary:

Sex.

Male	2,160
Female	2,073
	4,233

Previous Residence.

Received from cities in which Orphanages are located	3,125
Received from counties in which Orphanages are located	330
Received from other counties in the Province	685
Immigrants and foreigners and unknown	93
	4,233

TABLE I.—Schedule "C"—Orphanages.

Name of Orphanage.	Location.	No. in residence 1st of October, 1916.	No. admitted during the year ending 30th Sept., 1917.	Total number maintained during the year.	No. discharged during the year.	No. of deaths during the year.	No. remaining in residence on 30th Sept., 1917.
Nazareth Orphanage	Cornwall	33	19	52	27	.....	25
St. Joseph's Orphanage	Fort William	87	58	145	56	.....	89
Boys' Home	Hamilton	66	35	101	37	.....	64
Girls' Home	"	46	37	83	40	.....	43
Infants' Home and Home for the Friendless	"	57	165	222	163	4	55
St. Mary's OrphanAsylum	"	96	96	192	74	.....	118
Salvation Army Rescue Home	"	29	42	71	40	3	28
Orphans' Home and Widows' Friend Society	Kingston	60	69	129	84	.....	45
St. Mary of the Lake Orphanage	"	101	67	168	71	4	93
Kitchener Orphanage	Kitchener	32	83	115	82	.....	33
Protestant Orphans' Home	London	39	52	91	53	.....	38
Roman Catholic Orphans' Home	"	134	97	231	98	5	128
Salvation Army Rescue Home and Childrens' Shelter	"	22	94	116	80	10	26
Ottawa Boys' Home	Ottawa	5	46	51	44	.....	7
Protestant Orphans' Home	"	49	57	106	57	.....	49
St. Joseph's Orphanage	"	209	169	378	167	.....	211
St. Patrick's Orphanage	"	97	73	170	68	.....	102
Salvation Army Rescue and Children's Home	"	59	101	160	93	4	63
St. Vincents' Orphanage	Peterborough	41	18	59	26	.....	33
Loyal True Blue Orphanage	Picton	67	22	89	22	1	66
St. Agatha Orphan Home	St. Agatha	52	23	75	20	.....	55
Protestant Orphans' Home	St. Catharines	31	48	79	57	.....	22
Boys' Home	Toronto	89	57	146	67	.....	79
Girls' Home	"	69	56	125	59	.....	66
Home for Incurable Children	"	29	9	38	7	2	29
Infants' Home and Infirmary	"	79	145	224	130	12	82
Protestant Orphans' Home	"	143	79	222	93	.....	129
Sacred Heart Orphanage	"	239	268	507	250	2	255
Working Boys' Home	"	14	74	88	58	.....	30
Totals for 1917	.....	2,074	2,159	4,233	2,123	47	2,063
Totals for 1916	.....	2,287	2,141	4,428	2,222	97	2,109

TABLE II.—Schedule C.—Orphanages.

Name of Orphanage.	Location.	Aggregate stay of inmates.	Total expenditure on maintenance account for the year ending 30th September, 1917.	Average cost per inmate per day.
			$ c.	cents
Nazareth Orphanage	Cornwall	11,898	*	.....
St. Joseph's Orphanage	Fort William	33,897	8,168 00	0.24
Boys' Home	Hamilton	24,637	6,728 61	0.27
Girls' Home	"	15,578	6,064 08	0.39
Infants' Home and Home for the Friendless	"	21,359	6,918 35	0.32
St. Mary's Orphan Asylum	"	40,348	12,530 50	0.31
Salvation Army Rescue Home	"	10,242	4,582 67	0.45
Orphans' Home and Widows' Friend Society	Kingston	19,589	6,909 12	0.35
St. Mary of the Lake Orphanage	"	34,229	6,139 49	0.18
Kitchener Orphanage	Kitchener	11,861	2,901 81	0.24
Protestant Orphans' Home	London	14,132	6,546 31	0.46
Roman Catholic Orphans' Home	"	46,361	15,090 10	0.33
Salvation Army Rescue Home and Children's Shelter	"	9,774	4,447 68	0.45
Ottawa Boys' Home	Ottawa	3,622	3,247 34	0.90
Protestant Orphans' Home	"	19,245	9,568 43	0.50
St. Joseph's Orphanage	"	83,144	19,528 49	0.23
St. Patrick's Orphanage	"	35,581	†	.....
Salvation Army Rescue and Children's Home	"	22,846	8,628 81	0.38
St. Vincent's Orphanage	Peterborough	13,838	3,462 11	0.25
Loyal True Blue Orphanage	Picton	23,468	11,123 55	0.47
St. Agatha Orphan Home	St. Agatha	18,778	3,787 26	0.20
Protestant Orphans' Home	St. Catharines	10,937	5,018 31	0.46
Boys' Home	Toronto	29,168	14,037 12	0.48
Girls' Home	"	23,591	10,615 12	0.45
Home for Incurable Children	"	10,501	9,998 53	0.95
Infants' Home and Infirmary	"	30,556	15,723 75	0.51
Protestant Orphans' Home	"	51,336	19,312 22	0.38
Sacred Heart Orphanage	"	85,933	24,293 23	0.28
Working Boys' Home	"	8,674	7,422 84	0.86
Totals for 1917	.....	765,123	252,793 83	0.33
Totals for 1916	.....	808,985	252,793 83	0.30

* Included in Hotel Dieu Hospital.

† Included in Refuge Branch.

TABLE III.—Schedule C—Orphanages.

Name of Orphanage.	Location.	Collective days' stay upon which computation of Orphanage rate is based.	Collective days' stay upon which computation of Refuge rate is based.	Amount received from all sources other than Government.	Computation at two (2) cents per day.	Computation at seven (7) cents. per day, being Refuge rate for adults.	Total Government grant for the year 1917.
				$ c.	$ c.	$ c.	$ c.
Nazareth Orphanage	Cornwall	11,898	.....	.....	237 96	.....	237 96
St. Joseph's Orphanage	Fort William	33,897	.....	6,963 81	677 94	.....	677 94
Boys' Home	Hamilton	24,637	.....	6,433 01	492 74	.....	492 74
Girls' Home	"	15,578	.....	5,754 89	311 56	.....	311 56
Infants' Home and Home for the Friendless	"	17,149	4,210	6,429 87	342 98	294 70	637 68
St. Mary's Orphan Asylum	"	40,348	.....	11,715 93	806 96	.....	806 96
Salvation Army Rescue Home	"	5,372	4,870	4,158 20	107 44	340 90	448 34
Orphans' Home and Widows' Friend Society	Kingston	19,589	.....	6,456 48	391 78	.....	391 78
St. Mary of the Lake Orphanage	"	34,229	.....	5,479 82	684 58	.....	684 58
Kitchener Orphanage	Kitchener	11,861	.....	2,352 61	237 22	.....	237 22
Protestant Orphans' Home	London	14,132	.....	5,880 92	282 64	.....	282 64
Roman Catholic Orphans' Home	"	46,361	.....	14,220 19	927 22	.....	927 22
S. A. Rescue Home and Children's Shelter	"	4,861	4,913	4,056 02	97 22	343 91	441 13
Ottawa Boys' Home	Ottawa	3,622	.....	3,163 32	72 44	.....	72 44
Protestant Orphans' Home	"	19,245	.....	9,985 03	384 90	.....	384 90
St. Joseph's Orphanage	"	83,144	.....	17,932 90	1,662 88	.....	1,662 88
St. Patrick's Orphanage	"	35,581	.....	.....	711 62	.....	711 62
Salvation Army Rescue and Children's Home	"	18,917	3,929	6,499 48	378 34	275 03	653 37
St. Vincent's Orphanage	Peterboro'	13,838	.....	3,252 67	276 76	.....	276 76
Loyal True Blue Orphanage	Picton	23,468	.....	13,609 18	469 36	.....	469 36
St. Agatha Orphan Home	St. Agatha	18,778	.....	4,000 07	375 56	.....	375 56
Protestant Orphans' Home	St. Catharines	10,937	.....	4,757 02	218 74	.....	218 74
Boys' Home	Toronto	29,168	.....	14,078 48	583 36	.....	583 36
Girls' Home	"	23,591	.....	10,253 29	471 82	.....	471 82
Home for Incurable Children	"	10,501	.....	9,942 92	210 02	.....	210 02
Infants' Home and Infirmary	"	21,320	9,236	13,682 86	426 40	646 52	1,072 92
Protestant Orphans' Home	"	51,336	.....	18,038 29	1,026 72	.....	1,026 72
Sacred Heart Orphanage	"	80,610	5,323	21,272 52	1,612 20	372 61	1,984 81
Working Boys' Home	"	8,674	.....	7,349 48	173 48	.....	173 48
Totals for 1917	.....	732,642	32,481	$238,019 26	14,652 84	2,273 67	16,926 51
Totals for 1916	.....	777,490	38,768	221,511 65	15,549 80	2,713 76	18,263 56

SEPARATE REPORTS

NAZARETH ORPHANAGE, CORNWALL.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.	
In residence, 1st October, 1916..	33
Admitted	19
Total number of inmates ..	52
Discharged	27
Died	....
In residence, 30th September, 1917	25
—	52

Sex.	
Male	27
Female	25
	52
Places Admitted From.	
Town of Cornwall	26
County of Stormont	23
Other counties and countries ..	....
Immigrants, etc.	....
	52

The revenues and expenditures of this Orphanage are included in those of the Hotel Dieu Hospital, Cornwall, and cannot be shown separately.

Government aid for 1917, $237.96.

ST. JOSEPH'S ORPHANAGE, FORT WILLIAM.

The following summaries show the operations of this Charity during the year:

Movements of Inmates.	
In residence, 1st October, 1916.	87
Admitted	58
Total number of inmates ..	145
Discharged	56
Died	....
In residence, 30th September, 1917	89
	145

Sex.	
Male	71
Female	74
	145
Places Admitted From.	
District of Thunder Bay	105
Fort William	40
Other counties in the Province	....
Immigrants, etc.	....
	145

The revenue of the Home, including the Government grant of $680.16, was $7,643.97, and the expenditure, $8,168.00.

Government aid for 1917, $677.94.

PROTESTANT ORPHAN ASYLUM, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.	
In residence, 1st October, 1916..	....
Admitted	....
Total number of inmates ..	....
Discharged	....
Deaths	....
In residence, 30th September, 1917	....
	....

Sex.	
Male	....
Female	....
	....
Places Admitted From.	
City of Hamilton	....
County of Wentworth and other countries	....
	....

The receipts and expenditures are included in the financial statements of the Aged Women's Home, *vide* Schedule "B" Refuge Report.

Government aid for 1917, ————.

BOYS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1916..	66
Admitted	35
Total number of inmates ..	101
Discharged	37
In residence, 30th September, 1917	64
	101

Places Admitted From.	
Hamilton City	101
County of Wentworth	....
	101

The receipts of the Home during the year, including the Government grant of $485.40, were $6,918.41, and the expenditures were $6,728.61.

Government aid for 1917, $492.74.

GIRLS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1916..	46
Admitted	37
Total number of inmates ..	83
Discharged	40
Number of deaths	....
In residence, 30th September, 1917	43
	83

Places Admitted From.	
City of Hamilton	83
County of Wentworth	....
	83

The revenue of the Home during the year, including the Government grant of $296.14, was $6,051.03, and the expenditure was $6,064.08.

Government aid for 1917, $311.56.

HOME FOR THE FRIENDLESS AND INFANTS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1916 ..	57
Admitted	165
Total number of inmates ..	222
Discharged	163
Died	4
In residence, 30th September, 1917	55
	222

Sex.	
Male	84
Female	138
	222

Places Admitted From.	
City of Hamilton	163
County of Wentworth	17
Other places and counties	23
Aliens	19
	222

The revenue of the Home, including Government grant of $714.87, was $7,144.74, and the expenditure, $6,918.35.

Government aid for 1917, $637.68.

ST. MARY'S ORPHAN ASYLUM, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1916..	96
Admitted	96
Total number of inmates ..	192
Discharged	74
Died	....
In residence, 30th September, 1917	118
	192

Sex.

Male	109
Female	83
	192

Places Admitted From.

City of Hamilton	163
County of Wentwarth	9
Other counties and countries ..	20
	192

Including the Government grant of $817.96, the revenue of the Asylum during the year amounted to $12,533.89, and the expenditure to $12,530.50.

Government aid for 1917, $806.96.

THE SALVATION ARMY RESCUE HOME, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1916..	29
Admitted	42
Total number of inmates ..	71
Discharged	40
Died	3
In residence, 30th September, 1917	28
	71

Sex.

Male	48
Female	23
	71

Places Admitted From.

City of Hamilton	53
County of Wentworth	....
Other counties and countries ..	18
Aliens, etc.	....
	71

The revenue of this Asylum for the year, including the Government grant of $583.12, amounted to $4,741.32, and the expenditure to $4,582.67.

Government aid for 1917, $448.34.

ORPHANS' HOME, KINGSTON.

The following summaries show the operations of this Institution during the year:

Movements of Inmates.

In residence, 1st October, 1916..	60
Admitted	69
Total number of inmates ..	129
Discharged	84
Died	....
In residence, 30th September, 1917	45
	129

Sex.

Male	70
Female	59
	129

Places Admitted From.

City of Kingston	116
County of Frontenac	3
Other counties in Ontario	10
Immigrants, foreigners, etc.	....
	129

The revenue of this Home for the year, including the Government grant of $461.46, was $6,917.92, and expenditure was $6,909.12.

Government aid for 1917, $391.78.

ST. MARY'S OF THE LAKE ORPHANAGE, KINGSTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	101
Admitted	67
Total number of inmates ..	168
Discharged	71
Died	4
In residence, 30th September, 1917	93
	168

Sex.

Male	77
Female	91
	168

Places Admitted From.

City of Kingston	102
County of Frontenac	....
Other counties	66
Immigrants, etc.	....
	168

The income of the Asylum during the year, including the Government grant of $758.28, amounted to $6,238.10, and the expenditure to $6,139.49.

Government aid for 1917, $684.58.

KITCHENER ORPHANAGE, KITCHENER.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1916 ..	32
Admitted	83
Total number of inmates ..	115
Discharged	82
Died	....
In residence, 30th September, 1917	33
	115

Sex.

Male	60
Female	55
	115

Places Admitted From.

Town of Kitchener	46
County of Waterloo	51
Counties in Ontario	18
Immigrants, etc.	....
	115

The revenue of the Home, including the Government grant of $236.40, was $2,589.01, and the expenditures were $2,901.81.

Government aid for 1917, $237.22.

PROTESTANT ORPHANS' HOME, LONDON.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1916..	39
Admitted	52
Total number of inmates ..	91
Discharged	53
Died	....
In residence, 30th September, 1917	38
	91

Sex.

Male	48
Female	33
	91

Places Admitted From.

City of London	91
Other counties	....
	91

The revenue of the Home, including the Government grant of $397.50, was $6,278.42, and the expenditures were $6,546.31.

Government aid for 1917, 282.64.

ROMAN CATHOLIC ORPHANS' HOME, LONDON.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1916..	134
Admitted	97
Total number of inmates ..	231
Discharged	98
Died	5
In residence, 30th September, 1917	128
	231

Sex.

Male	132
Female	99
	231

Places Admitted From.

City of London	84
County of Middlesex	6
Other parts of the Province ..	141
	231

The revenue of the Home during the year, including the Government grant of $906.64, amounted to $14.220.19, and the expenditure to $15,090.10.

Government aid for the year 1917, $927.22.

S. A. RESCUE HOME AND CHILDREN'S SHELTER, LONDON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	22
Admitted	94
Total number of inmates ..	116
Discharged	80
Died	10
In residence, 30th September, 1917	26
	116

Sex.

Male	26
Female	90
	116

Places Admitted From.

City of London	68
Middlesex and other counties ..	45
Immigrants, foreigners, etc. ..	3
	116

The revenue of the Home, including Government grant of $452.35, was $4,508.37, and the expenditure, $4,447.68.

Government aid for 1917, $441.13.

BOYS' HOME, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	5
Admitted	46
Total number of inmates ..	51
Discharged	44
Died	....
In residence, 30th September, 1917	7
	51

Sex.

Male	51
Female	....
	51

Places Admitted From.

City of Ottawa	25
County of Carleton	25
Other counties in Province	....
Immigrants, foreigners, etc. ..	1
	51

The revenue of the Home during the year, including Government grant of $57.62, amounted to $3,332.17, and the expenditures to $3,247.34.

Government aid for 1917, $72.44.

ORPHANS' HOME, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	49
Admitted	57
Total number of inmates ..	106
Discharged	57
Died	....
In residence, 30th September, 1917	49
	106

Sex.

Male	58
Female	48
	106

Places Admitted From.

City of Ottawa	94
County of Carleton	2
Other counties	5
Immigrants, etc.	5
	106

The receipts and expenditures are included in the financial statement of the Refuge Branch of the Orphans' Home, Ottawa. See Schedule "B," Refuge Report.

Government aid for 1917, $384.90.

ST. JOSEPH'S ORPHAN ASYLUM, OTTAWA.

The following summaries show the operations of this Charity during the year:

Movements of Inmates.

In residence, 1st October, 1916 ..	209
Admitted	169
Total number of inmates ..	378
Discharged	167
Died	....
In residence, 30th September, 1917	211
	378

Sex.

Male	170
Female	208
	378

Places Admitted From.

City of Ottawa	196
County of Carleton	15
Other counties in Ontario	167
	378

The receipts of the Institution, including Government grant of $1,652.52, were $19,585.42, and the expenditures, $19,528.49.

Government aid for 1917, $1,662.88.

ST. PATRICK'S ORPHAN ASYLUM, OTTAWA.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1916..	97
Admitted	73
Total number of inmates ..	170
Discharged	68
Died	....
In residence, 30th September, 1917	102
	170

Sex.

Male	86
Female	84
	170

Places Admitted From.

City of Ottawa	134
County or Carleton	10
Other parts of Province	26
Other countries	....
	170

The receipts and expenditures of this Institution are included in the financial statement of the Refuge Department; *vide* Schedule "B," Refuge Report.

Government aid for 1917, $711.62.

S. A. RESCUE HOME AND CHILDREN'S SHELTER, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	59
Admitted during the year	101
Total number of inmates ..	160
Discharged	93
Died	4
In residence, 30th September, 1917	63
	160

Sex.

Male	57
Female	103
	160

Places Admitted From.

City of Ottawa	138
County of Carleton	....
Other counties	17
Immigrants, foreigners, etc. ...	5
	160

The revenue of the Home, including Government grant of $835.77, was $7,335.25, and the expenditures were $8,029.17.

Government aid for 1917, $653.37.

ST. VINCENT'S ORPHANAGE, PETERBOROUGH.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	41
Admitted	18
Total number of inmates ..	59
Discharged	26
Number of deaths	....
In residence, 30th September, 1917	33
	59

Sex.

Male	28
Female	31
	59

Places Admitted From.

City of Peterborough	25
County of Peterborough	1
Other counties in the Province ..	33
	59

The revenue of the Home, including the Government grant of $245.42, during the year was $3,498.09, and the expenditures were $3,462.11.

Government aid for 1917, $276.76.

LOYAL TRUE BLUE ORPHANAGE, PICTON.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1916..	67
Admitted	22
Total	89
Discharged	22
Died	1
In residence, 30th September, 1917	66
	89

Sex.

Male	54
Female	35
	89

Places Admitted From.

City of Toronto	38
County of Prince Edward	12
Other counties of Ontario	39
Aliens	....
	89

The revenue of the Home, including the Government grant of $456.66, was $14,065.84, and the expenditures were $11,123.55.

Government aid for 1917, $469.36.

ST. AGATHA ORPHAN ASYLUM, ST. AGATHA.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1916..	52
Admitted	23
Total number of inmates ..	75
Discharged	19
Died	1
In residence, 30th September, 1917	55
	75

Sex.

Male	33
Female	42
	75

Places Admitted From.

County of Waterloo	75
Other counties	....
Aliens	....
	75

The revenue of the Asylum was $4,395.03, including the Government grant of $394.36, and the expenditure, $3,787.26.

Government aid for 1917, $375.56.

PROTESTANT HOME (ORPHANAGE BRANCH), ST. CATHARINES.

The following summaries show the operations of this Charity during the year:

Movements of Inmates.

In residence, 1st October, 1916..	31
Admitted	48
Total number of inmates ..	79
Discharged	57
Died	....
In residence, 30th September, 1917	22
	79

Sex.

Male	47
Female	32
	79

Places Admitted From.

City of St. Catharines	79
County of Lincoln	....
Other counties	....
Aliens	....
	79

The revenue of the Home during the year, including the Government grant of $182.80, amounted to $4,939.82, and the expenditure, $5,018.31.

Government aid for 1917, $218.74.

BOYS' HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	89
Admitted	57
Total number of inmates ..	146
Discharged	67
Died	....
In residence, 30th September, 1917	79
	146

Places Admitted From.

City of Toronto	146
County of York	....
Counties of Ontario	....
Immigrants, foreigners, etc.	....
	146

The receipts of the Home during the year, including the Government grant of $613.68, amounted to $14,692.16, and the expenditures were $14,037.12.

Government aid for the year, 1917, $583.36.

GIRLS' HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	69
Admitted	56
Total number of inmates ..	125
Discharged	59
Died	....
In residence, 30th September, 1917	66
	125

Places Admitted From.

City of Toronto	121
County of York	3
Other parts of Ontario	1
	125

The receipts of the Institution during the year, including the Government grant of $487.12, amounted to $10,740.41, and the expenditure, $10,615.12.

Government aid for 1917, $471.82.

HOME FOR INCURABLE CHILDREN, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	29
Admitted	9
Total number of inmates ..	38
Discharged	7
Died	2
In residence, 30th September, 1917	29
	38

Sex.

Male	21
Female	17
	38

Places Admitted From.

City of Toronto	16
Other counties in the Province	19
Immigrants, foreigners, etc.	3
	38

The revenue of the Home during the year, including the Government grant of $215.48, amounted to $10,158.40, and the expenditure to $9,998.53.

Government aid for 1917, $210.02.

THE INFANTS' HOME AND INFIRMARY, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	79
Admitted	145
Total number of inmates ..	224
Discharged	130
Died	12
In residence, 30th September, 1917	82
	224

Sex.

Male	95
Female	129
	224

Places Admitted From.

City of Toronto	171
County of York	....
Other Counties in Ontario	....
Immigrants, foreigners, etc.	53
	224

The receipts of the Home during the year, including the Government grant of $1,385.82, were $15,068.38, and the expenditures were $15,723.75.

Government aid for the year, 1917, $1,072.92.

PROTESTANT ORPHANS' HOME, TORONTO.

The following summaries show the operations of this Institution during the past year:—

Movements of Inmates.

In residence, 1st October, 1916..	143
Admitted	79
Total number of inmates ..	222
Discharged	93
Died	....
In residence, 30th September, 1917	129
	222

Sex.

Male	125
Female	97
	222

Places Admitted From.

City of Toronto	210
Immigrants, foreigners, etc. ...	....
Other parts of Ontario	12
	222

The receipts of the Institution during the year, including the Government grant of $1,150.92, were $18,947.19, and the expenditures were $19,312.22.

Government aid for the year 1917, $1,026.72.

ROMAN CATHOLIC ORPHAN ASYLUM, TORONTO.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1916..	237
Admitted	268
Total number of inmates ..	507
Discharged	250
Died	2
In residence, 30th September, 1917	255
	507

Sex.

Male	247
Female	260
	507

Places Admitted From.

City of Toronto	472
County of York	3
Other parts of Ontario	30
Immigrants, foreigners, etc. ..	2
	507

The receipts of the Institution during the year, including the Government grant of $2,530.96, were $23,803.48, and the expenditures were $24,636.52.

Government aid for the year 1917, $1,984.81.

THE WORKING BOYS' HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1916..	14
Admitted	74
Total number of inmates ..	88
Discharged	58
In residence, 30th September, 1917	30
	88

Sex.

Male	88
	88

Places Admitted From.

City of Toronto	73
County of York	....
Counties of Ontario	13
Aliens	2
	88

The receipts of the Home during the year, including the Government grant of $149.20, amounted to $7,498.68, and the expenditures were $7,422.84.

Government aid for the year 1917, $173.48.

COUNTY HOUSES OF REFUGE

The following returns have been received from the Houses of Refuge maintained by the different Counties in Ontario. These returns show the approximate value of the buildings, contents and land, also the number of acres in connection with each House of Refuge. The receipts and expenditures are also stated, together with the average number of inmates in each Refuge.

COUNTY OF BRANT.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$2,000 00
" " contents	1,800 00
" " land	3,500 00
Number of acres	61

Receipts.

Profits of farm	.....
Received from all other sources	$1,032 76
Amount provided out of taxation and received from Treasurer	7,897 16

Expenditures.

Maintenance of House	$8,838 16
Average number of inmates	66

COUNTY OF BRUCE.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$22,000 00
" " contents	1,200 00
" " land	3,500 00
Number of acres	61

Receipts.

Profits of farm	$240 00
Received from all other sources	404 90
Amount provided out of taxation and received from Treasurer	6,538 92

Expenditures.

Maintenance of House	$7,183 82
Average number of inmates	61

COUNTY OF ELGIN.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$26,000 00
" " contents	2,500 00
" " land	10,700 00
Number of acres	100

Receipts.

Profits of farm	1,351 36
Received from all other sources	354 00
Amount provided out of taxation and received from Treasurer	6,038 66

Expenditures.

Maintenance of House	$4,560 77
For permanent improvements	.....
Average number of inmates	57

COUNTY OF ESSEX.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$40,000 00
" " contents	1,706 00
" " land	6,000 00
Number of acres	50

Receipts.

Profits of farm	$4,220 74
Received from all other sources	3,311 82
Amount provided out of taxation and received from Treasurer	.....

Expenditures.

Maintenance and improvements of House	$11,245 77
Average number of inmates	59

COUNTY OF GREY.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$21,000 00
" " contents	3,550 00
" " land	5,200 00
Number of acres	97

Receipts.

Profits of farm	$1,523 83
Received from all other sources	1,143 00
Amount provided out of taxation and received from Treasurer	3,994 86

Expenditures.

Maintenance of House	$6,233 21
Average number of inmates	52

COUNTY OF HALDIMAND.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$22,000 00
" " contents	2,600 00
" " land	5,000 00
Number of acres	50

Receipts.

Profits of farm	$1,748 94
Received from all other sources	250 00
Amount provided out of taxation and received from Treasurer	4,605 58

Expenditures.

Maintenance of House	$5,355 42
Average number of inmates	30

COUNTY OF HASTINGS.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$35,000 00
" " contents	3,000 00
" " land, barns and machinery	12,000 00
Number of acres	72

Receipts.

Profits of farm	$1,210 87
Received from all other sources	429 20
Amount provided out of taxation and received from Treasurer	13,227 07

Expenditures.

Maintenance of House	$14,867 76
Average number of inmates	94

COUNTY OF HURON.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$25,000 00
" " contents	2,000 00
" " land	3,000 00
Number of acres	47½

Receipts.

Profits of farm	$1,083 41
Received from all other sources	818 25
Amount provided out of taxation and received from Treasurer	7,917 07

Expenditures.

Maintenance of House	$5,372 41
Average number of inmates	88

COUNTY OF KENT.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$25,000 00
" " contents	2,200 00
" " land	5,000 00
Number of acres	50

Receipts.

Profits of farm	$1,536 16
Received from all other sources	.....
Amount provided out of taxation and received from Treasurer	6,844 84

Expenditures.

Maintenance of House	$7,099 95
Average number of inmates	54

COUNTY OF LAMBTON.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	2,000 00
" " land	6,000 00
Number of acres	60

Receipts.

Profits of farm	$653 00
Received from all other sources	.....
Amount provided out of taxation and received from Treasurer	9,363 49

Expenditures.

Maintenance of House	$9,363 49
Average number of inmates	42

COUNTY OF LANARK.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$34,000 00
" " contents	6,900 00
" " land	6,600 00
Number of acres	75

Receipts.

Profits of farm	$1,419 75
Received from other sources	5,790 96
Amount provided out of taxation and received from Treasurer	6.782 53

Expenditures.

Maintenance of House	$13,993 24
Average number of inmates	85

COUNTIES OF LEEDS AND GRENVILLE.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$20,000 00
" " contents	5,000 00
" " land	5,000 00
Number of acres	100

Receipts.

Profits of farm	$865 08
Received from all other sources	711 43
Amount provided out of taxation and received from Treasurer	4,272 18

Expenditures.

Maintenance of House	$5,481 70
Average number of inmates	51

COUNTY OF LINCOLN.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	5,396 80
" " land	14,000 00
Number of acres	70

Receipts.

Profits of farm	$4,998 64
Received from all other sources	2,661 50
Amount provided out of taxation and received from Treasurer	6,138 96

Expenditures.

Maintenance of House and improvements	.....
Average number of inmates	42

COUNTY OF MIDDLESEX.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$35,000 00
" " contents	5,000 00
" " land	12,300 00
Number of acres	82

Receipts.

Profits of farm	$2,755 00
Received from all other sources	410 04
Amount provided out of taxation and received from Treasurer	9,755 21

Expenditures.

Maintenance of House	$11,994 29
Average number of inmates	69

COUNTY OF NORFOLK.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$25,000 00
" " contents	2,500 00
" " land	5,000 00
Number of acres	90

Receipts.

Profits of farm	$806 44
Received from all other sources	18 75
Amount provided out of taxation and received from Treasurer	7,054 60

Expenditures.

Maintenance of House	$6,030 44
Average number of inmates	53

COUNTIES OF NORTHUMBERLAND AND DURHAM.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$55,500 00
" " contents	3,000 00
" " land	4,500 00
Number of acres	45

Receipts.

Profits of farm, sale of stock	$378 90
Received from all other sources	566 52
Amount provided out of taxation and received from Treasurer	14,978 83

Expenditures.

Maintenance of House and permanent improvements	$15,924 25
Average number of inmates	85

COUNTY OF ONTARIO.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$28,000 00
" " contents	.....
" " land	4,050 00
Number of acres	48

Receipts.

Profits of farm	$683 16
Received from all other sources	826 60
Amount provided out of taxation and received from Treasurer	9,848 05

Expenditures.

Maintenance of House	$10,886 50
Average number of inmates	73

COUNTY OF OXFORD.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	6,657 00
" " land	6,500 00
Number of acres	100

Receipts.

Profits of farm	$1,728 10
Received from all other sources	250 50
Amount provided out of taxation and received from Treasurer	9,867 13

Expenditures.

Maintenance of House	$7,888 53
Average number of inmates	73

COUNTIES OF PEEL AND HALTON.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings and land	$37,000 00
" " contents	2,500 00
" " land	.....
Number of acres	50

Receipts.

Profits of farm	.....
Received from all sources	$1,233 73
Amount provided out of taxation and received from Treasurer	3,296 40

Expenditures.

Maintenance of House, net cost	$7,497 11
Average number of inmates	50

COUNTY OF PERTH.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	4,000 00
" " land	5,400 00
Number of acres	54

Receipts.

Profits of farm	$729 80
Received from all other sources	393 90
Amount provided out of taxation and received from Treasurer	6,297 32

Expenditures.

Maintenance of House	$7,421 02
Average number of inmates	54

COUNTY OF PETERBOROUGH.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$24,350 00
" " contents	2,150 00
" " land	5,500 00
Number of acres	96

Receipts.

Profits of farm	$994 17
Received from all other sources	5 25
Amount provided out of taxation and received from Treasurer	.....

Expenditures.

Maintenance of House	$5,204 87
Average number of inmates	34

COUNTIES OF PRESCOTT AND RUSSELL.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$45,000 00
" " contents	8,000 00
" " land	2,000 00
Number of acres	100

Receipts.

Profits of farm	$726 22
Received from all other sources	1,265 85
Amount provided out of taxation and received from Treasurer	8,034 04

Expenditures.

Maintenance of House	$10,026 11
Average number of inmates	65

COUNTY OF PRINCE EDWARD.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	2,500 00
" " land	4,500 00
Number of acres	45

Receipts.

Profits of farm	$1,821 47
Received from all other sources	833 65
Amount provided out of taxation and received from Treasurer	3,540 44

Expenditures.

Maintenance of House	$6,195 56
Average number of inmates	36

COUNTY OF SIMCOE.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$35,000 00
" " contents	3,500 00
" " land	6,500 00
Number of acres	100

Receipts.

Profits of farm	$720 00
Received from all other sources	507 10
Amount provided out of taxation and received from Treasurer, including improvements	$15,194 89

Expenditures.

Maintenance of House	$9,154 87
Average number of inmates	83

COUNTIES OF STORMONT, DUNDAS AND GLENGARRY.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$60,000 00
" " contents	7,147 00
" " land	6,000 00
Number of acres	140

Receipts.

Profits of farm	$808 72
Received from all other sources	488 03
Amount provided out of taxation and received from Treasurer	7,000 00

Expenditures.

Maintenance of House	$9,679 73
Average number of inmates	48

COUNTY OF VICTORIA.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$45,000 00
" " contents	8,370 00
" " land	8,345 00
Number of acres	70

Receipts.

Profits of farm	$576 86
Received from all other sources	762 34
Amount provided out of taxation and received from Treasurer	8,940 93

Expenditures.

Maintenance of House	$10,280 13
Average number of inmates	53

COUNTY OF WATERLOO.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$20,000 00
" " contents	5,000 00
" " land	28,000 00
Number of acres	150

Receipts.

Profits of farm	$1,116 38
Received from all other sources	644 23
Amount provided out of taxation and received from Treasurer	12,929 40

Expenditures.

Maintenance of House	$14,690 01
Average number of inmates	101

COUNTY OF WELLAND.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings, " " contents, " " land	$25,800 00
Number of acres	60

Receipts.

Profits of farm	$1,334 35
Received from all other sources	2,226 49
Amount provided out of taxation and received from Treasurer	7,043 94

Expenditures.

Maintenance of House	$10,604 78
Average number of inmates	64

COUNTY OF WELLINGTON.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$41,000 00
" " contents	6,000 00
" " land	3,000 00
Number of acres	58

Receipts.

Profits of farm	$485 84
Received from all other sources	796 20
Amount provided out of taxation and received from Treasurer	9,400 00

Expenditures.

Maintenance of House	$6,489 57
Average number of inmates	72

COUNTY OF WENTWORTH.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	6,000 00
" " land	14,000 00
Number of acres	188

Receipts.

Profits of farm	$3,373 38
Received from all other sources	566 00
Amount provided out of taxation and received from Treasurer	7,123 39

Expenditures.

Maintenance of House, and permanent improvements	$7,123 39
Average number of inmates	32

COUNTY OF YORK.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	6,000 00
" " land	7,000 00
Number of acres	70

Receipts.

Profits of farm	$1,682 59
Received from all other sources	242 60
Amount provided out of taxation and received from Treasurer	9,900 00

Expenditures.

Maintenance of House	$11,934 96
Average number of inmates	68

Fiftieth Annual Report

OF THE

Inspector of Prisons and Public Charities

UPON THE

Prisons and Reformatories

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 31st OCTOBER

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Parliament Buildings, Toronto, January 26th, 1918.

To His Honour Sir John Strathearn, Hendrie, C.V.O., a Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I beg to submit herewith the Fiftieth Annual Report upon the Prisons and Reformatories being for the year ending 31st October, 1917.

I have the honour to be,

Your Honour's most obedient servant,

W. D. McPherson,

Provincial Secretary.

Toronto, November 14th, 1917.

Sir,—I have the honour to submit herewith, to be presented to His Honour the Lieutenant-Governor, the Fiftieth Annual Report upon the Prisons and Reformatories of the Province of Ontario, being for the year ending 31st October, 1917.

I have the honour to be, Sir

Your obedient servant,

W. W. Dunlop,

Inspector.

The Honourable W. D. McPherson, M.P.P.,

Secretary of the Province of Ontario,
Toronto.

CONTENTS

COMMON GAOLS PAGE

Introductory remarks 9

Commitments, Table of, since 1869 12

Table No. 1, giving details of commitments 13

Crimes against the person, Table of 14

" " property, Table of 14

" " public morals and decency, Table of 15

Offences against public order and peace, Table of 15

Other causes for which persons were detained, Table of 16

Drunkenness, decrease of commitments for 18

Dispositions made of persons committed 20

Convicted persons, places where sentenced to 20

Crimes and offences for which sentenced persons were convicted 20

Periods of sentence awarded 21

Sex of persons committed 22

Social conditions of persons committed 22

Habits of persons committed 22

Educational status of persons committed 22

Prisoners in custody 30th September, 1916 22

Statistical tables 23

Gaol expenditure 24

INDUSTRIAL FARM, BURWASH 46

TORONTO MUNICIPAL FARM, LANGSTAFF 47

ANDREW MERCER REFORMATORY FOR FEMALES 50

ONTARIO REFORMATORY 51

FIFTIETH ANNUAL REPORT

UPON THE

Gaols and District Lock-ups of Ontario

In presenting the Fiftieth Annual Report of the Gaols and Lock-ups of Ontario, I beg to submit the following statistics for the year ending September 30th, 1917.

(1) Number of Gaols in Ontario 46
Number of Provincial Lock-ups 4

(2) Total expenditure for Gaol maintenance in Ontario:

In 1916	$195,291 74
In 1917	194,955 10
Decrease	$336 64

(3) The cash revenue from Gaol labour during 1917 was $2,703.07, and was earned at Kingston and Ottawa.

Average cost per day for each prisoner in the County Gaols of Ontario was:

In 1916	30.09 cents.
In 1917	40.62 cents.

(4) Number of persons committed to Gaols and Lock-ups during the past two years was:

In 1916	16,100
In 1917	12,445
Decrease during the past year	3,655
Commitments for murder in 1916	35
Commitments for murder in 1917	32
Decrease	3
Commitments for manslaughter in 1916	11
Commitments for manslaughter in 1917	16
Increase	5

Commitments for crime against the person:

In 1916	885
In 1917	514
Decrease	371

Commitments for crime against property:

In 1916	2,818
In 1917	2,671
Decrease	147

Commitments for crime against public morals and decency:

In 1916	1,002
In 1917	664
Decrease	338

Commitments for crime against public order and peace:

In 1916	8,997
In 1917	6,788
Decrease	2,209

Number of insane committed to Gaols:

In 1916	206
In 1917	225
Increase	19

Prisoners sentenced to the Penitentiary during the past year show a decrease of 125 as compared with the previous year, and the number transferred to the Reformatories was 1,442, more than in 1916.

Number of prisoners sentenced in 1916	9,364
Number of prisoners sentenced in 1917	7,867
Decrease	1,497

The percentage of sentences to commitments was:

In 1916	58.1
In 1917	63.2

The number of prisoners sentenced to terms over one year was 44 less than during the previous year.

The number confined in penal institutions of Ontario was 65 more on September 30th, 1917, than on the same date last year.

Of these committed during the year, 4,618 were married and 7,827 were single.

Habits of life of those committed to Gaols:

In 1916, number of commitments, 16,100; temperate, 4,066; percentage, 25.25.

In 1917, number of commitments, 12,445; temperate, 4,652; percentage, 37.38.

13.17 per cent. of the prisoners committed to the gaols during the past year could not read or write.

Number of days' stay of prisoners:

In 1916	232,051
In 1917	176,923
Showing a decrease of days	55,128

Escapes and captures:

Twenty-two prisoners escaped during the year, of whom twelve were re-captured.

Deaths in Gaols:

In 1916	13
In 1917	6

COMMON GAOLS.

The following table shows the number of prisoners committed to the Common Gaols in the Province in each year, from 1st October, 1869, to 30th September, 1917.

Date of Commitment.	Men over 16 years of age.	Boys under 16 years of age.	Women over 16 years of age.	Girls under 16 years of age.	Totals.
Commitments for the year ending 30th September, 1869	3,599	294	1,680	82	5,655
" " 1870	4,215	319	1,737	108	6,379
" " 1871	4,586	329	1,642	58	6,615
" " 1872	5,006	281	1,615	56	6,958
" " 1873	5,745	323	1,735	74	7,877
" " 1874	7,298	377	1,746	67	9,488
" " 1875	8,048	389	1,566	70	10,073
" " 1876	9,005	434	1,727	70	11,236
" " 1877	11,653	542	1,824	62	13,481
" " 1878	9,537	480	1,959	54	12,030
" " 1879	8,995	416	1,756	53	11,220
" " 1880	8,229	549	1,863	59	11,300
" " 1881	7,007	468	1,681	73	9,229
" " 1882	2,286	522	1,750	62	9,620
" " 1883	7,858	423	1,551	48	9,880
" " 1884	9,858	458	1,719	46	12,081
" " 1885	9,419	450	1,507	50	11,426
" " 1886	8,831	352	1,424	38	10,655
" " 1887	8,996	409	1,574	38	11,017
" " 1888	10,060	551	1,778	65	12,454
" " 1889	10,349	451	1,685	46	12,531
" " 1890	9,622	461	1,677	50	11,810
" " 1891	8,460	421	1,501	32	10,423
" " 1892	7,177	446	1,335	53	9,011
" " 1893	6,798	388	1,399	34	8,619
" " 1894	7,785	278	1,350	37	9,450
" " 1895	7,912	284	1,154	30	9,380
" " 1896	7,622	265	1,147	24	9,058
" " 1897	7,533	235	1,069	47	8,884
" " 1898	6,974	284	969	29	8,256
" " 1899	6,846	267	1,057	33	8,203
" " 1900	7,063	298	1,291	42	8,694
" " 1901	7,059	262	1,198	27	8,546
" " 1902	6,850	216	1,199	15	8,280
" " 1903	7,815	225	1,200	21	9,261
" " 1904	8,810	156	1,165	15	10,146
" " 1905	9,668	113	1,232	22	11,035
" " 1906	9,541	136	1,124	9	10,810
" " 1907	10,489	87	1,217	11	11,804
" " 1908	11,670	76	1,323	14	13,083
" " 1909	11,935	87	1,501	12	13,535
" " 1910	12,073	87	1,514	13	13,687
" " 1911	13,572	91	1,600	12	15,275
" " 1912	15,238	91	1,645	11	16,985
" " 1913	17,442	85	1,713	10	19,250
" " 1914	21,024	84	1,665	4	22,777
" " 1915	18,566	90	1,669	12	20,337
" " 1916	14,506	80	1,502	12	16,100
" " 1917	11,417	142	878	8	12,445

The next table shows the number of prisoners (male and female) committed to each gaol during 1916 and 1917, and the increase and decrease in the commitments of the latter year compared with the former.

Name of Gaol.	Number of prisoners committed in the year ending 30th Sept., 1916.			Number of prisoners committed in the year ending 30th Sept., 1917.			Increase.			Decrease.		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Barrie	193	11	204	148	2	150	....	....	.....	45	9	54
Kitchener	149	12	161	91	7	98	....	....	.....	58	5	63
Belleville	284	38	322	194	9	203	....	....	.....	90	29	119
Brantford	326	11	337	127	5	132	....	....	.....	199	6	205
Brampton	27	2	29	28	1	29	1	....	1	....	1	1
Brockville	176	23	199	64	12	76	....	....	.....	112	11	123
Bracebridge	20	2	22	17	3	20	....	1	1	3	....	3
Cayuga	60	2	62	24	2	26	....	....	.....	36	....	36
Cornwall	66	7	73	32	2	34	....	....	.....	34	5	39
Cobourg	144	4	148	82	4	86	....	....	.....	62	....	62
Chatham	208	13	221	154	19	173	....	6	6	54	....	54
Fort Frances	140	4	144	81	1	82	....	....	.....	59	3	62
Goderich	50	1	51	35	6	41	....	5	5	15	....	15
Guelph	67	5	72	46	5	51	....	....	.....	21	....	21
Gore Bay	15	4	19	11	1	12	....	....	.....	4	3	7
Hamilton	1,544	134	1,678	714	64	778	....	....	.....	830	70	900
Kingston	210	18	228	86	6	92	....	....	.....	124	12	136
Kenora	22	2	24	20	4	24	....	2	2	2	....	2
London	749	87	836	423	70	493	....	....	.....	326	17	343
Lindsay	28	3	31	27	3	30	....	....	.....	1	....	1
L'Orignal	27	1	28	17	1	18	....	....	.....	10	....	10
Milton	183	2	185	48	.....	48	....	....	.....	135	2	137
Napanee	53	4	57	17	.....	17	....	....	.....	36	4	40
North Bay	152	19	171	175	12	187	23	....	23	....	7	7
Ottawa	703	160	863	815	142	957	112	....	112	....	18	18
Owen Sound	76	8	84	53	4	57	....	....	.....	23	4	27
Orangeville	27	3	30	27	7	34	....	4	4	....	....	....
Perth	72	5	77	53	2	55	....	....	.....	19	3	22
Picton	95	1	96	20	3	23	....	2	2	75	....	75
Pembroke	110	3	113	92	3	95	....	....	.....	18	....	18
Peterborough	223	44	267	128	29	157	....	....	.....	95	15	110
Port Arthur	329	24	353	177	24	201	....	....	.....	152	....	152
Parry Sound	849	12	861	233	6	239	....	....	.....	616	6	622
Simcoe	103	3	106	31	5	36	....	2	2	72	....	72
St. Catharines	238	5	243	125	14	139	....	9	9	113	....	113
Sarnia	233	12	245	196	9	205	....	....	.....	37	3	40
Stratford	104	5	109	46	2	48	....	....	.....	58	3	61
Sandwich	177	15	192	352	21	353	155	6	161	....	....	....
St. Thomas	98	18	116	67	10	77	....	....	.....	31	8	39
Sault Ste. Marie	207	29	236	242	31	273	35	2	37	....	....	....
Sudbury	1,117	47	1,164	809	37	846	....	....	.....	308	10	318
Toronto	4,239	673	4,912	4,796	259	5,055	557	....	557	....	414	414
Walkerton	39	3	42	45	7	52	6	4	10	....	....	....
Woodstock	250	5	255	106	6	112	....	1	1	144	....	144
Welland	220	11	231	294	8	302	74	....	74	....	3	3
Whitby	83	1	84	60	2	62	....	1	1	23	....	23
Lock-ups:												
Atikokan	.....	.....	.....	.....	.....	.....	....	....	.....	....	....	....
Byng Inlet	9	.....	9	7	.....	7	....	....	.....	2	....	2
Cobalt	81	19	100	141	16	157	60	....	60	....	3	3
Mine Centre	10	.....	10	3	.....	3	....	....	.....	7	....	7
	14,585	1,515	16,100	11,559	886	12,445	1023	45	1,068	4049	674	4723

The number of commitments in five-year periods for the past sixteen years is shown in the subjoined tables divided into five classes:

1. CRIMES AGAINST THE PERSON.

Nature of crime.	1902 to 1906	1907 to 1911	1912 to 1916	1917
Assault, commou	1,729	2,091	2,610	261
Assault, felonious	883	1,087	1,052	86
Cutting and wounding, stabbing and shooting with intent	350	475	546	81
Rape and assault with intent	245	272	289	33
Murder	130	144	150	32
Manslaughter	60	55	72	16
Attempt at suicide	85	123	127	5
Miscellaneous	14	68	382	.....
Totals	3,496	4,315	5,228	514

2. CRIMES AGAINST PROPERTY.

Nature of crime.	1902 to 1906	1907 to 1911	1912 to 1916	1917
Arson and incendiarism	156	134	238	28
Burglary	279	343	435	117
Counterfeiting and passing counterfeit money	31	31	20	1
Destroying and injuring property	333	279	384	46
Embezzlement	28	44	35	.....
Forgery	233	407	462	73
Fraud and obtaining money or goods under false pretenses	627	1,059	1,857	246
Horse, cattle and sheep stealing	253	234	206	45
Housebreaking and robbery	723	929	1,434	241
Larceny	7,257	10,548	12,059	1,445
Receiving stolen goods	138	267	404	46
Trespass	1,928	1,919	3,511	128
Miscellaneous	.....	136	886	255
Totals	11,986	16,390	21,931	2,671

3. CRIMES AGAINST PUBLIC MORALS AND DECENCY.

Nature of crime.	1902 to 1906	1907 to 1911	1912 to 1916	1917
Bigamy	106	159	204	60
Inmates and frequenters of houses of ill-fame	769	959	1,720	260
Keeping houses of ill-fame	443	698	1,420	155
Perjury	103	206	165	26
Seduction	106	252	255	34
Indecent Assault and exposure	455	616	880	85
Miscellaneous	210	204	190	44
Totals	2,192	3,094	4,834	664

4. OFFENCES AGAINST PUBLIC ORDER AND PEACE.

Nature of crime.	1902 to 1906	1907 to 1911	1912 to 1916	1917
Abusive and obscene language	172	160	141	12
Breaches of Peace, breaches of by-laws, escapes from and obstructing constables	841	1,066	1,247	245
Carrying unlawful weapons	207	299	339	33
Deserting employment	333	72	230	51
Drunk and disorderly	17,624	25,685	36,027	3,907
Deserting the Militia	.....	.....	.....	348
Selling liquor without license, and selling or giving it to Indians	188	857	1,464	841
Threatening and seditious language	106	184	182	20
Vagrancy	7,900	10,233	15,328	1,274
Miscellaneous	698	322	290	57
Totals	28,069	38,878	55,248	6,788

5. OTHER CAUSES FOR WHICH PERSONS WERE DETAINED AS PRISONERS.

Nature of crime.	1902 to 1906	1907 to 1911	1912 to 1916	1917
Contempt of Court	345	306	438	49
Debtors	53	62	131	12
Detained as witnesses	73	109	192	35
Lunatics and persons dangerous to be at large	1,897	1,862	1,765	225
Non-payment of fines and costs	.....	3	.....	.....
Want of sureties to keep the peace	119	333	253	10
Other offences not classified in foregoing	1,292	2,318	5,429	1,477
Totals	3,779	4,993	8,208	1,808
Total number of persons committed for the respective years	49,532	67,670	95,449	12,445

STATISTICAL TABLES

A table showing the number of commitments to each gaol for drunkenness during compared, and the increase or de-

Name of gaol.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Barrie	34	34	19	10	21	9	24	21	11	10	16	12
Belleville	17	13	4	6	7	7	10	12	10	7	4	4
Brantford	49	34	18	24	25	19	16	12	13	16	12	11
Brampton	182	112	89	120	125	124	106	115	85	64	88	74
Brockville	30	17	.....	9	9	11	6	2	3	4	4	4
Bracebridge	58	41	44	77	86	70	43	48	49	45	41	58
Cayuga	15	19	5	5	5	4	4	3	2	3	.....	5
Cornwall	15	22	7	.....	5	6	6	9	10	13	10	19
Cobourg	25	14	22	27	10	24	9	11	28	21	19	12
Chatham	38	22	25	11	19	18	16	12	15	20	10	16
Fort Frances	71	47	26	28	22	67	9	13	13	15	18	18
Goderich	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guelph	5	5	2	3	3	.....	.....	2	1	2	5	5
Gore Bay	10	4	14	9	23	17	7	9	9	3	13	4
Hamilton	4	1	2	1	2	3	.....	.....	.....	.....	.....	.....
Kingston	418	251	142	148	55	36	60	56	60	66	96	108
Kitchener	126	125	87	102	72	89	49	51	50	48	31	47
Kenora	66	66	81	75	65	31	76	26	111	110	23	34
London	332	213	150	218	219	187	177	139	163	172	137	137
Lindsay	5	1	5	2	5	2	5	4	5	6	7	8
L'Orignal	.....	5	1	2	1	3	2	2	.....	2	2	.....
Milton	9	9	6	4	8	3	8	3	4	2	4	4
Napanee	22	23	12	9	20	8	6	5	13	4	7	4
North Bay	35	16	14	15	7	10	5	.....	4	.....	3	12
Ottawa	326	204	182	105	111	157	152	165	137	135	224	293
Owen Sound	17	13	14	11	6	.....	8	6	11	7	8	12
Orangeville	2	1	2	.....	.....	.....	.....	.....	1	.....	3	.....
Perth	5	5	3	2	3	6	2	2	7	9	7	12
Picton	33	19	11	11	21	11	22	31	23	30	35	19
Pembroke	1	..	5	7	4	7	3	5	5	.....	1	4
Peterborough	45	24	22	16	15	13	10	11	11	10	6	13
Port Arthur	12	4	3	4	1	3	5	12	4	2	9	8
Parry Sound	9	.....	2	4	5	7	2	3	3	5	8	4
Simcoe	3	10	5	3	11	17	6	6	16	10	11	6
St. Catharines	24	12	9	21	17	26	23	5	17	10	15	33
Sarnia	108	95	27	36	69	116	57	62	49	61	48	45
Stratford	14	4	7	9	15	7	10	15	5	1	9	12
Sandwich	35	57	38	11	19	39	16	23	20	16	27	18
St. Thomas	20	32	12	15	19	22	13	12	8	17	23	9
Sault Ste. Marie	12	10	12	8	5	2	12	9	8	7	7	21
Sudbury	55	77	5	119	38	42	25	41	34	54	197	222
Toronto	2,085	1,783	1,444	1,207	960	918	790	569	592	796	1,031	1,022
Walkerton	6	7	3	13	8	21	5	3	1	4	4	.....
Woodstock	51	34	24	38	21	29	37	35	32	31	21	39
Welland	16	7	13	12	11	19	17	16	14	19	20	24
Whitby	2	.....	1	2	1	2	.....	1	4	5	2	3
Lock-ups :												
Atikokan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burk's Falls	1	.....	.....	.....	.....	2	1	.....	1	.....	.....	4
Byng Inlet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cobalt	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Killarney	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manitowaning	33	33	22	16	5	16	4	2	4	5	7	10
Mine Centre	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webbwood	.....	....	.....	.....	.....	.....	9	7	6	2	9	17
Totals	4,475	3,528	2,641	2,575	2,174	2,236	1,873	1,596	1,672	1,869	2,282	2,446

the years 1890 to 1917, both inclusive. The figures for 1916 and 1917 are
crease in each place is shown.

1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	Increase, 1917.	Decrease, 1917.
21	14	16	27	46	58	39	29	59	51	57	64	140	73	43	6	.....	37
11	15	10	17	19	9	12	15	13	18	24	30	48	34	32	18	.....	14
20	6	12	6	15	34	67	33	61	89	56	110	63	106	57	23	.....	34
82	136	162	143	153	239	178	148	122	129	161	131	108	162	193	25	.....	168
5	3	4	8	10	5	1	5	1	10	8	14	2	11	4	4	.....	.....
66	55	50	50	91	86	63	40	54	59	49	83	62	56	60	12	.....	48
5	9	8	13	7	3	9	6	6	3	1	3	4	1	.....	1	1	.....
12	5	11	10	13	7	4	3	5	5	6	4	5	7	10	1	.....	9
15	18	17	14	7	7	12	32	16	10	9	16	27	20	9	7	.....	2
14	12	12	7	18	21	16	27	36	22	35	39	36	16	60	22	.....	38
11	9	8	16	16	27	28	30	36	36	44	46	83	55	84	27	.....	57
33	.....	.....	42	.....	15	15	16	28	55	57	184	149	52	42	30	.....	12
1	2	8	14	3	1	3	18	5	8	6	13	6	13	8	2	.....	6
13	4	6	12	7	6	4	5	10	7	3	9	16	14	2	.....	.....	2
1	3	3	.....	6	2	7	2	.....	5	1	.....	.....	3	4	.....	.....	1
97	188	229	287	290	394	360	413	479	580	702	986	603	494	761	129	.....	633
40	58	62	59	54	66	64	83	109	90	107	135	129	203	115	28	.....	87
26	37	21	19	19	88	92	33	6	15	101	25	19	7	8	4	.....	4
250	157	262	249	248	218	328	424	325	395	361	483	500	520	173	155	.....	318
8	8	10	10	2	6	11	8	12	30	7	3	9	5	3	1	.....	2
3	1	3	4	2	.....	1	1	.....	2	1	5	3	1	1	1	.....	.....
4	8	12	7	11	6	6	8	7	4	12	11	12	4	8	3	.....	5
7	3	5	8	13	12	19	21	18	21	23	25	45	18	18	.....	.....	18
5	73	99	171	73	103	46	38	40	18	88	90	93	55	19	8	.....	11
221	267	247	338	257	338	425	380	408	307	324	248	346	281	177	391	214	.....
16	12	10	5	6	10	13	15	41	73	65	18	17	24	10	10	.....	.....
.....	.....	.....	.....	1	.....	.....	.....	.....	1	3	1	1	1	.....	1	1	.....
17	34	20	2	20	24	27	17	19	8	20	31	22	19	13	.....	.....	13
21	18	18	28	8	21	42	25	33	31	26	28	32	47	50	2	.....	48
1	7	1	6	7	8	11	20	7	8	20	50	50	44	27	13	.....	14
9	14	23	13	24	33	22	27	23	40	37	119	143	87	71	11	.....	60
7	50	25	27	67	164	183	209	195	232	301	434	444	242	111	42	.....	69
5	25	10	35	153	68	26	25	28	35	50	58	55	79	516	35	.....	481
12	11	15	12	13	28	50	37	37	39	41	8	32	25	26	2	.....	24
21	28	20	33	20	20	25	43	42	73	67	60	102	82	80	31	.....	49
71	57	69	67	73	69	59	80	92	76	90	157	237	138	132	115	.....	17
8	15	19	46	35	21	42	24	29	29	36	67	73	34	36	5	.....	31
31	42	29	19	32	29	38	23	28	32	31	65	44	31	28	116	88	.....
6	5	8	2	4	3	12	15	19	11	5	17	48	30	12	4	.....	8
16	79	15	38	18	32	47	23	32	49	56	75	73	75	39	59	20	.....
172	49	164	117	253	281	223	268	288	316	508	1,054	1,643	658	531	211	.....	320
1,107	1,286	1,575	1,832	1,923	2,016	2,003	2,208	2,398	2,669	2,866	3,209	3,075	2,217	1,939	2,217	278	.....
1	1	1	.....	5	8	4	4	6	9	6	5	4	9	4	2	.....	2
36	41	31	22	17	24	34	31	32	41	45	52	77	69	86	9	.....	77
23	24	87	32	24	23	28	21	26	29	55	60	131	110	30	95	65	.....
5	2	11	10	29	12	8	18	14	12	8	10	17	14	16	2	.....	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	1	4	4	3	5	2	.....	7	4	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	.....	5	.....	.....	.....	.....	.....	11	.....	.....	.....	4	6	3	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	29	25	10	1	20	11	13	22	9	.....
.....	.....	.....	8	.....	10	10	16	4	3	.....	2	.....	.....	.....	.....	.....	.....
12	3	6	21	.....	9	9	8	1	2	7	20	.....	.....	.....	.....	.....	.....
.....	.....	.....	10	.....	23	.....	12	5	.....	6	4	3	4	1	2	1	.....
48	17	14	16	18	56	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2,627	2,913	3,452	3,941	4,133	4,748	4,736	4,987	5,291	5,827	6,613	8,363	8,848	6,235	5,968	5,907	677	2,738

The disposition made of the persons committed to the gaols of the Province is set forth in the table printed below:

	1917.
Acquitted on being brought to trial, and discharged	3,057
Discharged without trial by order of judges, magistrates and courts, including remand cases	579
Detained for want of securities to keep the peace	9
Detained as witnesses	32
Detained as fraudulent debtors	14
Detained as lunatics, idiots and persons unsafe to be at large	225
Died before trial	2
Detained by civil processes other than above	19
Waiting trial and otherwise detained on 30th September, 1914	189
Found guilty and sentenced	7,867
Discharged under suspended sentence	452
Total number of commitments	12,445

The places of confinement to which the convicted persons were sentenced are set forth in the following statement, and similar information is given as regards the sentenced prisoners of the previous year:

	1916	1917
Sentenced to Kingston Penitentiary	195	166
do to the Industrial School	25	370
do direct to Central Prison	694	695
do to the Common Gaols and subsequently transferred to the Central Prison	460	1,902
do direct to the Reformatory for Females	163	70
do to the Common Gaols and subsequently transferred to the Reformatory for Females	50	26
do to the Common Gaols and there detained until the expiration of sentence	7,764	4,632
Died while undergoing sentence	13	6
Totals	9,364	7,867

The summaries given below show the nature of the offence committed by the convicted persons:

1. *Crimes against the Person.*

	Total commitments for the year.	Number found guilty and sentenced.
Assault, common	261	146
Assault, felonious	86	43
Cutting and wounding, stabbing and shooting with intent	81	31
Rape and assault with intent	33	9
Murder	32	4
Manslaughter	16	2
Attempted suicide	5	3
Totals	514	238

2. *Crimes against Property.*

	Total commitments for the year.	Number found guilty and sentenced.
Arson and incendiarism	28	4
Burglary	117	40
Counterfeiting and passing counterfeit money	1	..
Destroying and injuring property	46	17
Embezzlement	..	..
Forgery	73	37
Fraud and obtaining money and goods under false pretences	246	132
Horse, cattle and sheep stealing	45	20
Housebreaking and robbery	241	125

Larceny	1,445	812
Receiving stolen goods	46	32
Trespass	128	81
Miscellaneous	255	71
Totals	2,671	1,371

3. *Crimes against Public Morals and Decency.*

	Total commitments for the year.	Number found guilty and sentenced.
Bigamy	60	40
Inmates and frequenters of houses of ill-fame	260	74
Keeping houses of ill-fame	155	73
Perjury	26	11
Seduction	34	10
Indecent assault and exposure	85	53
Miscellaneous	44	16
Totals	664	277

4. *Offences against Public Order and Peace.*

	Total commitments for the year.	Number found guilty and sentenced.
Abusive and obscene language	12	7
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	245	174
Carrying unlawful weapons	33	22
Deserting employment, etc.	51	37
Drunk and disorderly	3,907	3,206
Deserting the militia	348	249
Selling liquor without a license and selling or giving it to Indians	841	772
Threatening and seditious language	20	6
Vagrancy	1,274	532
Miscellaneous	57	31
Total	6,788	5,036
Contempt of court, lunatics, etc.	321	47
Other offences, not classified in foregoing	1,487	898
Grand total	12,445	7,867

The following tables show the period of sentence passed on the convicted prisoners and the sex, social conditions, habits, etc., of the total number of prisoners committed:

Periods of Sentence.

	1916	1917
For periods under thirty days	4,058	3,039
For thirty days and up to sixty days, or two months, not including the last term	2,035	1,712
For sixty days or two months	654	412
Over two months to three months	903	1,315
Over three months to four months	244	223
Over four months to five months	76	59
Over five months to six months	690	468
Over six months to nine months	65	58
Over nine months up to one year inclusive	242	120
Over one year and up to two years	171	176
Over two years and up to three years in the Penitentiary	139	94
Over three years in the Penitentiary	45	41
For periods of any length in the Industrial Schools	36	143
Sentenced to death and executed	3	..
Sentenced to death and commuted to imprisonment	..	2
Sentenced to imprisonment with corporal punishment	3	5
	9,364	7,867

Sex.

	1916	1917
Male	14,585	11,559
Female	1,515	886
	16,100	12,445

Social Conditions.

Married	5,849	4,618
Unmarried	10,251	7,827
	16,100	12,445

Habits.

Temperate	4,066	4,652
Intemperate	12,034	7,793
	16,100	12,445

Educational Status.

Could read and write	14,102	10,806
Could neither read nor write	1,998	1,639
	16,100	12,445

Nationality.		*Religious Denomination.*	
Canadian	7,087	Roman Catholic	5,415
English	892	English Church	1,975
Irish	461	Presbyterian	1,525
Scotch	348	Methodist	1,686
United States	861	Other denominations	1,844
Other countries	2,796		
	12,445		12,445

The number of prisoners confined in the various custodial institutions of the Province at the close of the past official year, and the year preceding, is exhibited in the following summary:

	1916	1917
In the Common Gaols	450	519
In Ontario Reformatory, Guelph	402	..
In the Reformatory for Females and Refuge for Girls, Toronto	110	96
In the Dominion Penitentiary, Kingston	540	389
	1,502	
*In the Industrial Farm, Burwash		312
*In the Industrial Farm, Fort William		29
*In the Toronto Municipal Farm, Langstaff		171
*In the Ontario Reformatory Clay Plant, Mimico		51
		1,567

* Not included in Report for 1916.

Statistical Tables.

Following this portion of the report will be found the tables named in the list given hereunder:

Table No. 2, showing the total number of prisoners in the several gaols on the 30th September, 1917, and the nature of their imprisonment; also showing number of cells in each gaol.

Table No. 3, showing the number of prisoners over and under 16 years of age, the number of recommittals, the number of persons acquitted on being brought to trial, and the number of persons committed under civil processes.

Table No. 4, showing the offences for which prisoners were sentenced.

Table No. 5, showing the number of prisoners, male and female, sentenced under each offence during the year.

Table No. 6, showing the social status and habits of the prisoners committed during the year.

Table No. 7, showing the number of prisoners upon whom sentence was passed, the nature of the sentences, and the operation of the County Judge's Criminal Courts.

Table No. 8, showing how the prisoners committed during the year were maintained, the cost thereof, and the salaries of officials.

Table No. 9, showing the number of escapes and deaths, the revenue derived from prison labour, the cost of diet, accommodation of the gaols, and the highest and lowest number of prisoners in custody in each gaol during the year.

Table No. 10, showing the daily cost per prisoner in each of the gaols of the Province for the year ending 30th September, 1917.

Table No. 11, showing the number of prisoners, male and female, sentenced during the year ending 30th September, 1917, and a comparison of the same with the previous year.

Gaol Expenditures.

TABLE No. 1.

Showing the cost of maintaining the Common Gaols during the past thirty-nine years, under the heading of rations, clothing, fuel, salaries and wages, and repairs.

Year.	Total number of prisoners in custody each year.	Cost of rations, clothing, fuel, etc., each year.	Cost of salaries and wages of gaol officials each year.	Cost of repairs.	Total gaol expenditure.
		$ c.	$ c.	$ c.	$ c.
1879	11,229	58,856 24	63,914 40	5,583 44	122,355 08
1880	11,300	49,037 14	64,084 34	3,504 96	116,626 44
1881	9,229	45,001 05	63,502 00	3,410 12	111,915 15
1882	9,620	44,768 92	63,794 30	4,665 52	113,228 75
1883	9,880	44,783 50	64,935 96	4,706 20	114,425 66
1884	12,081	61,909 89	68,446 88	7,125 50	127,482 27
1885	11,426	54,321 35	70,344 96	5,081 55	129,747 86
1886	10,645	53,300 43	71,690 76	8,753 07	133,744 26
1887	11,017	48,650 27	71,291 58	6,146 71	126,088 56
1888	12,454	53,961 25	73,633 11	6,509 13	134,143 49
1889	12,531	55,002 89	77,677 84	3,313 20	135,983 93
1890	11,810	51,446 99	79,394 49	9,171 01	140,012 49
1891	10,423	58,110 73	79,741 59	12,183 02	150,035 34
1892	9,011	51,505 57	75,564 83	4,635 65	135,706 05
1893	8,619	49,762 40	79,639 81	8,083 50	137,485 71
1894	9,450	45,115 58	79,790 80	6,728 04	131,634 42
1895	9,380	50,591 40	79,677 17	6,304 58	136,573 15
1896	9,058	49,107 73	80,940 04	6,778 50	135,826 27
1897	8,884	51,066 56	80,863 60	10,248 93	142,179 09
1898	8,256	50,412 91	80,915 05	5,982 56	137,310 52
1899	8,203	50,362 88	82,047 98	4,206 66	136,617 50
1900	8,604	50,353 75	82,144 05	4,944 21	137,442 10
1901	8,546	48,977 86	82,305 15	6,065 44	137,348 45
1902	8,280	49,125 35	85,350 04	6,515 40	140,990 79
1903	9,261	57,252 84	86,081 95	7,122 23	150,457 02
1904	10,146	59,916 13	89,164 98	5,413 09	154,494 20
1905	11,035	64,948 78	91,232 56	7,087 09	163,268 43
1906	10,810	59,874 67	91,663 85	6,635 49	158,174 01
1907	11,804	61,995 01	95,321 24	7,536 14	164,852 39
1908	13,083	68,468 72	98,651 71	8,708 79	175,829 20
1909	13,535	74,557 65	103,141 14	6,877 58	184,576 37
1910	13,687	66,042 87	102,649 54	10,574 71	181,851 05
1911	15,275	70,077 87	106,690 02	7,759 74	187,626 11
1912	16,985	83,708 63	114,462 75	5,765 38	203,936 76
1913	19,250	77,828 15	116,704 08	8,542 59	203,074 82
1914	22,777	87,825 99	124,516 23	9,128 51	221,470 73
1915	20,337	87,403 52	120,742 08	6,840 72	214,986 32
1916	16,100	69,918 14	119,727 46	5,646 14	195,291 74
1917	12,445	71,971 09	115,053 82	7,930 19	194,955 10

A summary is given below showing the days' stay respectively of those prisoners whose maintenance was chargeable to the Province and of those who were a charge on the Municipalities :—

		Days' stay.
4,710	Criminal prisoners remained in gaol	85,997
7,735	Municipal " " "	90,926
12,445	Prisoners in all " "	176,923

TABLE No. 2.

Showing the total number of prisoners who were in the several gaols of the Province on the evening of the 30th September, 1917, and the nature of their imprisonment; also number of cells in each gaol.

Name of gaol.	Classification.				Nature of Imprisonment.						Total number of persons who remained in custody 30th September, 1917.	Total number of cells.
	Men.	Women.	Boys under 16 years.	Girls under 16 years.	Waiting trial.	Under sentence for periods of 2 months and under.	Under sentence for periods over 2 months.	In default of sureties to keep the peace.	Insane, idiotic or imbecile persons.	Otherwise detained.		
Barrie	18	...	....	....	2	7	7	.....	.....	2	18	23
Belleville	11	...	....	....	6	1	3	.....	.....	1	11	38
Brantford	8	...	....	....	3	.....	4	.....	1	....	8	24
Brampton	4	...	....	....	....	1	2	.....	1	....	4	25
Brockville	1	1	....	....	....	1	1	.....	.....	....	2	33
Bracebridge	2	...	....	....	....	2	.....	.....	.....	....	2	15
Cayuga	2	...	....	....	....	1	1	.....	.....	....	2	14
Cornwall	1	...	....	....	1	.....	.....	.....	.....	....	1	17
Cobourg	4	1	....	....	2	.....	3	.....	.....	....	5	24
Chatham	9	2	....	....	6	1	4	.....	.....	....	11	38
Fort Frances	2	...	....	....	....	.....	.....	.....	1	1	2	10
Goderich	2	...	....	....	1	.....	1	.....	.....	....	2	12
Guelph	1	...	3	....	....	.....	4	.....	.....	....	4	18
Gore Bay	1	...	....	....	....	1	.....	.....	.....	....	1	12
Hamilton	32	4	....	....	8	2	23	1	1	1	36	75
Kingston	17	...	....	....	4	5	8	.....	.....	....	17	49
Kitchener	19	...	....	....	6	5	8	.....	.....	....	19	20
Kenora	...	...	....	....	....	.....	.....	.....	.....	....	.....	14
London	22	2	....	....	12	5	6	.....	1	....	24	57
Lindsay	2	...	....	....	....	.....	2	.....	.....	....	2	24
L'Orignal	1	...	....	....	....	.....	.....	.....	1	....	1	18
Milton	2	...	....	....	....	1	1	.....	.....	....	2	18
Napanee	...	...	....	....	....	.....	.....	.....	.....	....	.....	18
North Bay	8	1	....	....	2	2	4	.....	1	....	9	20
Ottawa	40	8	1	....	4	17	28	.....	.....	....	49	93
Owen Sound	4	...	....	....	....	.....	3	.....	1	....	4	32
Orangeville	7	3	2	....	....	.....	12	.....	.....	....	12	22
Perth	6	...	....	....	....	.....	6	.....	.....	....	6	18
Picton	...	...	1	....	1	.....	.....	.....	.....	....	1	18
Pembroke	8	...	....	....	1	3	4	.....	.....	....	8	24
Peterborough	14	1	....	....	8	4	3	.....	.....	....	15	18
Port Arthur	9	2	....	....	....	.....	7	.....	4	....	11	40
Parry Sound	5	...	....	....	1	2	2	.....	.....	....	5	26
Simcoe	1	...	....	....	....	.....	1	.....	.....	....	1	18
St. Catharines	5	1	....	....	2	.....	4	.....	.....	....	6	38
Sarnia	11	...	....	....	1	7	3	.....	.....	....	11	13
Stratford	6	...	....	....	4	1	1	.....	.....	....	6	30
Sandwich	20	1	....	....	2	14	5	.....	.....	....	21	58
St. Thomas	1	...	....	....	....	.....	1	.....	.....	....	1	16
Sault Ste. Marie	16	3	....	....	1	7	10	.....	1	....	19	23
Sudbury	34	1	....	....	9	1	19	.....	4	2	35	22
Toronto	86	13	....	....	73	12	9	.....	.....	5	99	270
Walkerton	2	...	....	....	....	.....	2	.....	.....	....	2	24
Woodstock	5	...	....	....	....	.....	4	.....	1	....	5	32
Welland	7	...	....	....	4	3	.....	.....	.....	....	7	48
Whitby	12	...	....	....	1	2	3	.....	1	5	12	28
Lock-ups:												
Atikokan	...	...	....	....	....	.....	.....	.....	.....	....	.....	3
Byng Inlet	...	...	....	....	....	.....	.....	.....	.....	....	.....	7
Cobalt	...	...	....	....	....	.....	.....	.....	.....	....	.....	6
Mine Centre	...	...	....	....	....	.....	.....	.....	.....	....	.....	3
Totals	468	44	7	....	165	108	209	1	19	17	519	1,546

TABLE

Showing the number of persons committed, the number over and under sixteen years of age, the sound mind, number acquitted on trial, number discharged without trial, number

Name of gaol.	Total number committed during the year.			Number under 16 years of age.			Number over 16 years of age.			For the first time.	For the second time.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.		
Barrie	148	2	150	2		2	146	2	148	136	9
Belleville	194	9	203	7	2	9	187	7	194	188	6
Brantford	127	5	132		1	1	127	4	131	102	12
Brampton	28	1	29	2		2	26	1	27	18	4
Brockville	64	12	76	4		4	60	12	72	55	13
Bracebridge	17	3	20				17	3	20	17	2
Cayuga	24	2	26				24	2	26	21	2
Cornwall	32	2	34	3		3	29	2	31	24	4
Cobourg	82	4	86	7		7	75	4	79	64	6
Chatham	154	19	173	11	1	12	143	18	161	122	33
Fort Frances	81	1	82	2		2	79	1	80	75	3
Goderich	35	6	41				35	6	41	32	5
Guelph	46	5	51	3		3	43	5	48	17	33
Gore Bay	11	1	12	3		3	8	1	9	8	3
Hamilton	714	64	778				714	64	778	540	86
Kingston	86	6	92	1		1	85	6	91	73	11
Kitchener	91	7	98				91	7	98	72	16
Kenora	20	4	24				20	4	24	21	2
London	423	70	493	28		28	395	70	465	309	91
Lindsay	27	3	30	2		2	25	3	28	25	4
L'Orignal	17	1	18	2		2	15	1	16	18	
Milton	48		48				48		48	33	3
Napanee	17		17				17		17	12	2
North Bay	175	12	187	1		1	174	12	186	180	7
Ottawa	815	142	957	9		9	806	142	948	875	55
Owen Sound	53	4	57				53	4	57	31	10
Orangeville	27	7	34	2		2	25	7	32	24	8
Perth	53	2	55	2		2	51	2	53	45	3
Picton	20	3	23	2	1	3	18	2	20	23	
Pembroke	92	3	95				92	3	95	92	2
Peterborough	128	29	157	1		1	127	29	156	93	31
Port Arthur	177	24	201				177	24	201	190	5
Parry Sound	233	6	239		1	1	233	5	238	222	12
Simcoe	31	5	36				31	5	36	23	8
St. Catharines	125	14	139	5		5	120	14	134	112	17
Sarnia	196	9	205	5		5	191	9	200	147	26
Stratford	46	2	48	1		1	45	2	47	38	10
Sandwich	332	21	353				332	21	353	281	19
St. Thomas	67	10	77	2		2	65	10	75	55	16
Sault Ste. Marie	242	31	273	1	1	2	241	30	271	214	26
Sudbury	809	37	846	4		4	805	37	842	714	78
Toronto	4,796	259	5,055	6	1	7	4,790	258	5,048	4,506	391
Walkerton	45	7	52	5		5	40	7	47	35	10
Woodstock	106	6	112	7		7	99	6	105	59	29
Welland	294	8	302				294	8	302	258	24
Whitby	60	2	62	2		2	58	2	60	42	13
Lock-ups :											
Atikokan											
Byng Inlet	7		7				7		7	7	
Cobalt	141	16	157	10		10	131	16	147	157	
Mine Centre	3		3				3		3	3	
Totals	11,559	886	12,445	142	8	150	11,417	878	12,295	10,408	1,150

No. 3.

number of re-committals, the number for want of sureties to keep the peace, number of unwaiting trial, number sentenced, and number committed under civil process.

For the third time.	For more than the third time.	For want of sureties to keep the peace.	Witnesses.	Lunatics and idiots.	Fraudulent debtors.	Under civil process.	Acquitted on trial and discharged.	Discharged without trial.	Discharged under suspended sentence.	Died before trial.	Waiting trial.	Sentenced for any period.
.....	5	.....	.....	4	.....	.....	6	1	9	.....	2	128
4	5	.....	.....	4	.....	.....	85	.....	9	.....	6	99
4	14	.....	.....	5	.....	.....	71	3	1	.....	2	50
5	2	.....	.....	2	.....	.....	10	5	2	.....	.....	10
3	5	.....	.....	.....	.....	.....	18	1	8	1	10	38
1	.....	.....	1	2	.....	.....	4	4	5	.....	.....	4
1	2	.....	.....	.....	.....	.....	5	.....	2	.....	.....	19
2	4	.....	.....	.....	.....	.....	5	.....	4	.....	1	24
7	9	.....	.....	4	.....	.....	13	.....	15	.....	2	52
9	9	.....	.....	3	.....	.....	89	.....	6	.....	6	69
1	3	.....	1	3	.....	.....	11	5	5	.....	.....	57
2	2	.....	.....	7	.....	.....	3	.....	8	.....	1	22
1	.....	.....	.....	.....	.....	.....	.....	9	3	.....	.....	39
.....	1	.....	.....	1	.....	.....	3	.....	2	.....	.....	6
31	121	9	1	27	.....	.....	8	182	10	.....	8	533
1	7	.....	.....	.....	.....	.....	4	11	.....	.....	3	74
4	6	.....	.....	3	2	.....	.....	27	10	.....	6	50
1	.....	.....	.....	4	.....	.....	4	.....	.....	.....	2	14
15	78	.....	.....	8	1	.....	187	4	5	.....	12	276
1	.....	.....	.....	13	.....	.....	2	.....	5	.....	.....	10
.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	16
1	11	.....	.....	.....	.....	5	3	23	1	.....	1	15
2	1	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	13
.....	.....	.....	.....	22	.....	.....	10	.....	.....	.....	2	153
15	12	.....	1	2	.....	.....	368	1	.....	.....	4	581
5	11	.....	.....	1	1	.....	10	.....	4	.....	.....	41
2	.....	.....	.....	.....	.....	.....	4	2	1	.....	.....	27
3	4	.....	.....	3	.....	.....	10	3	5	.....	.....	34
.....	.....	.....	.....	2	.....	.....	.....	21	.....	.....	.....	.....
1	.....	.....	.....	1	.....	.....	7	.....	3	.....	3	81
15	18	.....	.....	12	.....	.....	3	80	.....	.....	7	55
4	2	.....	1	23	.....	.....	18	6	1	.....	5	147
5	.....	.....	1	4	.....	.....	53	2	22	1	4	152
2	3	.....	.....	4	.....	.....	10	1	5	.....	.....	16
3	7	.....	.....	.....	.....	.....	32	.....	2	.....	2	103
17	15	.....	3	2	1	.....	2	51	10	.....	1	135
.....	.....	.....	.....	1	.....	.....	5	9	.....	.....	4	29
12	41	.....	.....	2	.....	.....	101	.....	34	.....	2	214
4	2	.....	.....	.....	1	.....	35	1	2	.....	.....	38
17	16	.....	.....	14	.....	.....	31	12	.....	.....	1	215
38	16	.....	14	24	.....	.....	60	.....	76	.....	9	663
90	68	.....	8	.....	2	.....	1,710	22	126	.....	74	3,113
4	3	.....	.....	4	.....	7	7	3	8	.....	.....	23
11	13	.....	.....	7	.....	.....	7	4	23	.....	.....	71
5	15	.....	1	.....	6	.....	3	78	.....	.....	4	210
6	1	.....	.....	2	.....	.....	17	.....	6	.....	1	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	3	.....	.....	23	5	10	.....	4	112
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
355	532	9	32	225	14	19	3,057	579	452	2	189	7,867

TABLE

Showing offences for which prisoners were sentenced

Name of gaol.	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault, felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.
Barrie			1	3						1	
Belleville					1						
Brantford								1			
Brampton											
Brockville				1	1			2			
Bracebridge											
Cayuga						1		1			
Cornwall				1	2						1
Cobourg		1									
Chatham				3	3						1
Fort Frances					2						
Goderich				1				1			
Guelph				1	1					1	1
Gore Bay				1							
Hamilton		1		10	1						
Kingston				2							
Kitchener		2						2			
Kenora											1
London				6				3		26	
Lindsay											
L'Orignal		1		2							
Milton											7
Napanee										5	
North Bay				8	1			2			2
Ottawa				15	2			2	12	6	
Owen Sound		1		1				1			
Orangeville											
Perth				1				1		5	2
Picton											
Pembroke				4							
Peterborough				5							
Port Arthur				5	4			1			
Parry Sound				5	1					4	
Simcoe											2
St. Catharines					4			1			3
Sarnia			1	2		1		1			
Stratford										1	
Sandwich				7	2					12	
St. Thomas				2				1	1		10
Sault Ste. Marie			1	6				1			
Sudbury				37				2		16	
Toronto			1	10	13	1		15		2	5
Walkerton				2				1			
Woodstock											
Welland				3	5						5
Whitby								1			
Lock-ups :											
Atikokan											
Byng Inlet											
Cobalt		1		2							
Mine Centre											
Totals		7	4	146	43	3		40	13	79	40

No. 4.

during the year ending 30th September, 1917.

Contempt of Court.	Carrying unlawful weapons.	Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting, wounding and attempting same.	Deserting employment	Destroying and injuring property.	Drunk and disorderly.	Deserting the Militia.	Escaping from and obstructing constables	Escaping from prison.	Forgery.	Fraud or obtaining money under false pretences.
1	.....	.....	1	.....	.....	.....	6	78	.....	2	1	1
2	.....	.....	.....	.....	.....	.....	17	15	2	.....	.....	2
.....	.....	.....	.....	.....	.....	3	11	.....	.....	.....	1	1
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	7	.....	.....	1	.....	1
.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	3
1	.....	.....	.....	.....	.....	.....	16	2	.....	.....	1	.....
.....	.....	.....	.....	1	.....	.....	27	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....
1	.....	.....	1	.....	.....	.....	.....	.....	.....	19	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
.....	7	.....	.....	.....	.....	3	121	.....	2	.....	6	17
.....	.....	.....	.....	.....	.....	.....	22	5	.....	.....	2	.....
4	.....	.....	.....	.....	.....	.....	12	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....
.....	.....	.....	1	.....	.....	.....	112	35	.....	2	1	2
.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	25	.....	8	3	.....	.....	.....	4
23	.....	.....	1	3	.....	.....	315	2	1	.....	1	2
.....	.....	.....	.....	.....	.....	.....	9	1	.....	.....	4	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	1	.....	.....	.....	13	10	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	2	41	3	2	.....	1	3
.....	.....	.....	1	.....	.....	.....	32	.....	2	.....	.....	19
1	.....	.....	.....	.....	1	.....	1	2	1	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	28	10	2	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	108	.....	.....	.....	1	1
4	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1
.....	4	.....	.....	.....	.....	.....	90	4	.....	1	.....	3
.....	1	.....	1	.....	.....	.....	3	2	.....	.....	.....	.....
.....	.....	.....	.....	3	5	2	53	6	2	.....	1	2
.....	2	.....	4	.....	.....	6	288	2	6	21	1	21
1	3	.....	.....	15	.....	.....	1,779	53	2	9	6	28
1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
.....	3	.....	.....	.....	6	.....	9	.....	.....	.....	.....	.....
4	1	.....	.....	.....	.....	.....	87	5	.....	.....	.....	6
.....	.....	.....	.....	.....	.....	.....	2	4	1	.....	2	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	22	.....	.....	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
47	22	.....	11	22	37	17	3,206	249	25	57	37	132

TABLE

Showing offences for which prisoners were sentenced

Name of gaol.	Gambling.	Giving liquor to Indians.	Horse, cattle and sheep stealing.	House breaking and robbery.	Incendiarism.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping house of ill-fame.	Larceny.	Manslaughter.	Misdemeanour	Murder.	Perjury.
Barrie	....	....	.....	.....	....	7	.....	....	10	....	....	....	....
Belleville	....	....	1	9	....	.....	.....	1	11	....	....	....	....
Brantford	....	....	1	3	....	.....	2	1	4	....	....	....	....
Brampton	....	....	.....	1	....	2	.....	....	2	....	....	....	....
Brockville	2	....	.....	1	....	1	.....	....	7	....	....	....	....
Bracebridge	....	....	1	.....	....	.....	.....	....	.....	....	....	....	....
Cayuga	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
Cornwall	....	....	.....	.....	....	.....	.....	....	5	....	....	2	....
Cobourg	....	....	.....	.....	....	.....	.....	....	7	....	....	....	....
Chatham	....	1	2	8	....	.....	.....	....	12	....	....	....	....
Fort Frances	3	1	.....	.....	....	1	.....	....	6	....	....	....	....
Goderich	....	....	.....	.....	....	.....	.....	....	4	....	....	....	....
Guelph	....	....	1	3	....	.....	.....	1	2	....	....	....	....
Gore Bay	....	....	.....	.....	....	.....	.....	....	1	....	....	....	2
Hamilton	....	....	.....	12	....	.....	1	4	60	....	....	....	1
Kingston	....	....	.....	.....	....	.....	.....	....	3	....	....	....	....
Kitchener	....	....	.....	.....	....	2	.....	....	2	....	....	....	1
Kenora	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
London	....	....	.....	2	....	.....	3	2	51	....	....	....	....
Lindsay	....	....	.....	5	....	.....	.....	....	.....	....	....	....	....
L'Orignal	....	....	.....	.....	....	.....	.....	....	.....	....	....	1	....
Milton	....	....	.....	1	....	.....	.....	....	1	....	....	....	....
Napanee	....	....	.....	.....	....	.....	.....	....	3	....	....	....	....
North Bay	1	....	.....	2	....	.....	8	....	13	....	....	....	1
Ottawa	....	....	1	7	....	1	13	10	73	....	....	....	....
Owen Sound	....	....	1	.....	....	.....	.....	....	8	....	....	....	....
Orangeville	....	....	.....	1	....	.....	.....	....	.....	....	....	....	....
Perth	....	....	1	2	....	.....	.....	....	.....	....	....	....	....
Picton	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
Pembroke	....	....	.....	.....	....	.....	.....	....	11	....	....	....	2
Peterborough	....	....	8	.....	....	1	.....	2	4	....	....	....	....
Port Arthur	....	1	.....	1	....	.....	.....	....	13	....	....	....	....
Parry Sound	....	....	.....	.....	....	4	1	1	15	....	2	....	....
Simcoe	....	....	.....	.....	....	.....	.....	....	4	....	....	....	....
St. Catharines	....	....	1	.....	....	.....	3	2	7	....	11	....	1
Sarnia	....	....	.....	.....	....	2	1	1	8	....	....	....	....
Stratford	....	....	.....	1	....	1	1	1	3	....	....	....	....
Sandwich	....	....	1	2	....	.....	.....	1	31	....	2	1	1
St. Thomas	....	....	.....	.....	....	2	2	....	.....	....	....	....	....
Sault Ste. Marie	....	5	.....	.....	....	2	.....	....	14	1	1	....	....
Sudbury	29	....	.....	1	....	.....	2	4	29	....	....	....	....
Toronto	25	....	.....	51	....	24	37	39	365	1	....	....	2
Walkerton	1	....	.....	.....	....	.....	.....	....	3	....	....	....	....
Woodstock	3	....	.....	.....	....	.....	.....	....	6	....	....	....	....
Welland	....	....	1	3	....	2	.....	....	.....	....	....	....	....
Whitby	....	....	.....	9	....	1	.....	....	.....	....	....	....	....
Lock-ups :													
Atikokan	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
Byng Inlet	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
Cobalt	7	....	.....	.....	....	.....	.....	3	14	....	....	....	....
Mine Centre	....	....	.....	.....	....	.....	.....	....	.....	....	....	....	....
Totals	71	8	20	125	....	53	74	73	812	2	17	4	11

No. 4—Concluded.

during the year ended 30th September, 1917.

Prostitution.	Rape and assault with intent.	Refusing bail.	Receiving stolen goods.	Seduction.	Selling liquor without a license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful shooting.	Vagrancy.	Other offences not enumerated.	Totals.
.....	.....	.....	.....	.....	4	1	.....	.....	.....	.....	8	3	128
.....	.....	.....	.....	.....	14	.....	.....	1	4	.....	8	11	99
.....	.....	.....	.....	.....	20	.....	.....	.....	1	.....	1	.....	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	10
.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	2	1	38
.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	1	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	9	2	19
.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	24
.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	18	.....	52
.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	13	.....	69
.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	3	8	57
.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	11	22
.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2	1	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	6
.....	.....	.....	2	.....	.....	1	.....	.....	11	.....	14	259	533
.....	3	.....	.....	1	.....	.....	.....	.....	1	.....	5	30	74
.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	7	14	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	6	14
.....	.....	.....	.....	.....	7	.....	.....	.....	1	.....	17	5	276
.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	7	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	15
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	13
1	1	.....	.....	.....	44	.....	.....	.....	7	.....	12	9	153
.....	.....	.....	3	.....	11	.....	.....	.....	1	.....	26	50	581
.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	7	3	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	.....	27
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	19	.....	34
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	1	.....	.....	.....	.....	2	2	.....	9	24	81
.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	10	9	55
3	1	.....	6	.....	10	4	.....	.....	12	2	11	21	147
.....	.....	.....	.....	.....	29	.....	.....	.....	1	.....	16	19	152
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	16
.....	.....	.....	.....	1	15	.....	.....	.....	.....	.....	2	7	103
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	5	2	135
.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	3	.....	29
2	.....	.....	.....	1	23	.....	.....	.....	3	.....	13	10	214
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	12	38
6	1	.....	3	.....	51	.....	.....	1	4	.....	12	32	215
4	.....	.....	4	.....	120	.....	.....	.....	6	.....	51	87	663
.....	.....	.....	10	1	367	1	.....	.....	12	.....	115	120	3,113
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	3	23
.....	.....	.....	.....	3	7	.....	.....	.....	.....	.....	34	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	15	69	210
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	7	7	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	1	.....	3	.....	.....	.....	.....	.....	.....	55	112
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	9	.....	32	10	764	9	.....	6	81	3	532	898	7,867

TABLE No. 5.

Showing the total number of prisoners, male and female, sentenced under each offence, during the year ending 30th September, 1917.

Offences.	Male.	Female.	Total
Abortion	.....	.....	.....
Abusive and obscene language	6	1	7
Arson	4	.....	4
Assault	145	1	146
Assault, felonious	43	.....	43
Attempted suicide	2	1	3
Abduction	.....	.....	.....
Bigamy	32	8	40
Breaches of the peace	11	2	13
Breaches of by-laws	77	2	79
Burglary	39	1	40
Contempt of court	47	.....	47
Carrying unlawful weapons	22	.....	22
Counterfeiting and passing counterfeit money	.....	.....	.....
Cruelty to animals	11	.....	11
Cutting, wounding and attempting same	22	.....	22
Deserting employment	36	1	37
Destroying and injuring property	17	.....	17
Drunk and disorderly	3,098	108	3,206
Deserting militia	249	.....	249
Escaping from or obstructing constables	24	1	25
Escaping from prison	52	5	57
Forgery	30	7	37
Fraud or obtaining money or goods under false pretences	131	1	132
Gambling	71	.....	71
Giving liquor to Indians	8	.....	8
Horse, cattle and sheep stealing	20	.....	20
Housebreaking and robbery	124	1	125
Incendiarism	.....	.....	.....
Indecent assault and exposure	53	.....	53
Inmates and frequenters of houses of ill-fame	48	26	74
Keepers houses of ill-fame	39	34	73
Larceny	747	65	812
Manslaughter	2	.....	2
Misdemeanour	17	.....	17
Murder	3	1	4
Perjury	10	1	11
Prostitution	.....	16	16
Rape and assault with intent	9	.....	9
Refusing bail	.....	.....	.....
Receiving stolen property	25	7	32
Seduction	10	.....	10
Selling liquor without license	747	17	764
Shooting with intent	7	2	9
Stabbing	.....	.....	.....
Threatening and seditious language	6	.....	6
Trespass	79	2	81
Unlawful shooting	3	.....	3
Vagrancy	457	75	532
Other offences not enumerated	868	30	898
Totals	7,451	416	7,867

TABLE No. 6.

Showing the social status and habits of the prisoners committed during the year ending 30th September, 1917.

Name of gaol.	Married.	Unmarried.	Temperate	Intemperate.	Total committed to gaol.	Neither read nor write.
Barrie	55	95	122	28	150	21
Belleville	60	143	142	61	203	28
Brantford	49	83	62	70	132	34
Brampton	4	25	9	20	29	1
Brockville	45	31	48	28	76	8
Bracebridge	6	14	19	1	20	3
Cayuga	11	15	8	18	26	3
Cornwall	19	15	16	18	34	21
Cobourg	28	58	53	33	86	4
Chatham	71	102	104	69	173	37
Fort Frances	35	47	33	49	82	18
Goderich	14	27	34	7	41	3
Guelph	22	29	42	9	51	13
Gore Bay	4	8	10	2	12	4
Hamilton	314	464	269	509	778	120
Kingston	25	67	17	75	92	10
Kitchener	40	58	67	31	98	8
Kenora	8	16	15	9	24	.....
London	151	342	247	246	493	13
Lindsay	7	23	23	7	30	4
L'Orignal	5	13	9	9	18	8
Milton	9	39	36	12	48	.....
Napanee	3	14	11	6	17	1
North Bay	58	129	103	84	187	31
Ottawa	418	539	288	669	957	237
Owen Sound	29	28	30	27	57	10
Orangeville	12	22	27	7	34	9
Perth	13	42	31	24	55	15
Picton	11	12	18	5	23	.....
Pembroke	31	64	42	53	95	21
Peterborough	47	110	128	29	157	17
Port Arthur	65	136	69	132	201	49
Parry Sound	71	168	165	74	239	32
Simcoe	17	19	25	11	36	5
St. Catharines	44	95	84	55	139	34
Sarnia	67	138	40	165	205	31
Stratford	17	31	25	23	48	6
Sandwich	185	168	82	271	353	.....
St. Thomas	26	51	59	18	77	8
Sault Ste. Marie	93	180	91	182	273	68
Sudbury	236	610	47	799	846	59
Toronto	1,891	3,164	1,478	3,577	5,055	621
Walkerton	21	31	34	18	52	5
Woodstock	36	76	96	16	112	13
Welland	143	159	133	169	302	.....
Whitby	14	48	54	8	62	6
Lock-ups:						
Atikokan	.....	.....	.....	.....	.....	.....
Byng Inlet	2	5	1	6	7	.....
Cobalt	86	71	106	51	157	.....
Mine Centre	.....	3	.....	3	3	.....
Totals	4,618	7,827	4,652	7,793	12,445	1,639

TABLE

Showing the number of prisoners upon whom sentences were passed, the nature of such
Court during the year ending

Name of gaol.	Total number of prisoners sentenced during the year.			Where sentenced to.					
	Male.	Female.	Total.	To gaol and afterwards transfered to the Reformatory.	To Reformatory for Ontario direct.	To gaol and afterwards to Female Reformatory.	To Female Reformatory direct.	To Penitentiary.	Sentenced elsewhere.
Barrie	126	2	128	28	70	.....	1	2	4
Belleville	98	1	99	.....	4	1	.....	5	2
Brantford	49	1	50	3	8	.....	1	1	.....
Brampton	10	.....	10	.....	3	.....	.....	.....	2
Brockville	34	4	38	.....	1	.....	3	2	2
Bracebridge	3	1	4	.....	1	.....	1	.....	.....
Cayuga	18	1	19	.....	.....	.....	.....	.....	1
Cornwall	22	2	24	.....	3	.....	.....	4	.....
Cobourg	52	.....	52	.....	.....	.....	.....	.....	2
Chatham	61	8	69	1	13	1	1	1	5
Fort Frances	56	1	57	3	2	.....	.....	3	4
Goderich	21	1	22	.....	1	.....	.....	.....	.....
Guelph	37	2	39	3	8	.....	.....	15	.....
Gore Bay	5	1	6	.....	1	.....	1	.....	.....
Hamilton	503	30	533	69	54	2	8	11	.....
Kingston	69	5	74	.....	7	.....	.....	1	.....
Kitchener	47	3	50	.....	9	2	1	2	.....
Kenora	11	3	14	.....	.....	.....	.....	1	.....
London	246	30	276	.....	59	.....	10	8	7
Lindsay	10	.....	10	.....	5	.....	.....	.....	5
L'Orignal	15	1	16	.....	.....	.....	.....	1	3
Milton	15	.....	15	.....	.....	.....	.....	2	8
Napanee	13	.....	13	.....	1	.....	.....	.....	7
North Bay	146	7	153	55	36	.....	2	1	.....
Ottawa	512	69	581	19	15	8	1	6	.....
Owen Sound	39	2	41	2	5	.....	2	6	.....
Orangeville	21	6	27	.....	.....	.....	.....	.....	.....
Perth	34	.....	34	.....	3	.....	.....	1	.....
Picton	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pembroke	78	3	81	1	5	.....	.....	6	.....
Peterborough	47	8	55	2	.....	.....	6	8	.....
Port Arthur	133	14	147	1	10	.....	1	3	.....
Parry Sound	152	.....	152	.....	70	.....	.....	3	.....
Simcoe	15	1	16	1	5	1	.....	.....	1
St. Catharines	92	11	103	16	4	6	2	2	3
Sarnia	130	5	135	.....	6	.....	5	3	1
Stratford	27	2	29	.....	2	.....	.....	.....	1
Sandwich	193	21	214	.....	28	.....	2	6	8
St. Thomas	32	6	38	.....	14	.....	.....	1	1
Sault Ste. Marie	193	22	215	.....	31	.....	10	4	1
Sudbury	639	24	663	16	131	.....	2	16	9
Toronto	2,996	117	3,113	1,647	70	5	8	28	274
Walkerton	23	.....	23	.....	.....	.....	.....	1	2
Woodstock	69	2	71	5	2	.....	.....	3	8
Welland	207	3	210	30	1	.....	.....	4	.....
Whitby	35	1	36	.....	6	.....	1	5	.....
Lock-ups :									
Atikokan	.....	.....	.....	.....	.....	.....	.....	.....	.....
Byng Inlet	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cobalt	103	9	112	.....	1	.....	1	.....	9
Mine Centre	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	7,437	430	7,867	1,902	695	26	70	166	370

No. 7.

sentences, and the disposal of those who elected to be tried at the County Judge's Criminal September 30th, 1917.

Died while under going sentence.	To gaol and there detained until expiration of sentence or payment of fine.	Capital and corporal sentences.			County Judge's criminal court.		
		Number of prisoners sentenced to death and executed.	Number of prisoners sentenced to death and commuted to imprisonment.	Number of prisoners sentenced to corporal punishment with imprisonment.	Acquitted on trial and discharged from custody.	Found guilty and sentenced.	Total number who elected to be tried.
.....	23	.....	.....	.....	1	10	11
.....	87	.....	.....	.....	15	5	20
.....	37	.....	.....	.....	5	6	11
.....	5	.....	.....	.....	2	1	3
.....	30	.....	.....	.....	11	10	21
.....	2	.....	.....	.....	3	2	5
.....	18	.....	.....	.....	3	4	7
.....	17	.....	.....	.....	2	8	10
.....	50	.....	.....	.....	1	6	7
.....	47	.....	.....	1	8	10	18
.....	45	.....	.....	.....	2	1	3
.....	21	.....	.....	.....	1	12	13
.....	13	.....	.....	1	.....	3	3
1	3	.....	.....	.....	1	2	3
.....	389	.....	.....	.....	8	63	71
.....	66	.....	.....	.....	3	5	8
.....	36	.....	.....	.....	.....	11	11
.....	13	.....	.....	.....	.....	.....	.....
.....	192	.....	.....	1	4	25	29
.....	.....	.....	.....	.....	.....	.....	.....
.....	12	.....	1	.....	.....	2	2
.....	5	.....	.....	.....	3	15	18
.....	5	.....	.....	.....	.....	3	3
.....	59	.....	.....	.....	10	2	12
.....	532	.....	.....	.....	14	7	21
.....	26	.....	.....	.....	5	9	14
1	26	.....	.....	.....	1	.....	1
1	29	.....	.....	.....	13	7	20
.....	.....	.....	.....	.....	.....	.....	.....
.....	69	.....	.....	1	6	1	7
.....	39	.....	.....	.....	.....	5	5
1	131	.....	.....	.....	3	1	4
.....	79	.....	.....	.....	2	3	5
.....	8	.....	.....	.....	2	3	5
.....	70	.....	.....	.....	7	8	15
.....	120	.....	.....	.....	2	13	15
.....	26	.....	.....	.....	.....	3	3
.....	170	.....	1	.....	9	2	11
.....	22	.....	.....	.....	10	10	20
.....	169	.....	.....	.....	.....	6	6
.....	489	.....	.....	.....	7	19	26
.....	1,081	.....	.....	1	37	146	183
2	18	.....	.....	.....	6	5	11
.....	53	.....	.....	.....	1	3	4
.....	175	.....	.....	.....	3	2	5
.....	24	.....	.....	.....	22	36	58
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	101	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
6	4,632	.....	2	5	233	495	728

TABLE

Showing the number of prisoners, how maintained, cost of maintenance, and

Name of gaol.	Name of gaoler.	How Maintained.				
		Total number of prisoners committed during the year.	Number of prisoners whose maintenance was defrayed by the Province.	Number of prisoners whose maintenance was defrayed by the municipalities.	Number of days' custody of Government prisoners.	Number of days' custody of municipal prisoners.
Barrie	H. E. Stoddart	150	100	50	3,377	1,753
Belleville	T. Ketcheson	203	120	83	2,081	1,261
Brantford	Chas. Jones	132	66	66	789	1,271
Brampton	Jas. McClure	29	17	12	652	179
Brockville	W. R. Scace	76	35	41	582	590
Bracebridge	D. McDonald	20	20	.....	647	.....
Cayuga	Thos. Walsh	26	10	16	217	541
Cornwall	T. W. Ault	34	24	10	593	120
Cobourg	G. L. McLaughlin	86	21	65	548	1,782
Chatham	Jno. Davidson	173	39	134	2,038	2,948
Fort Frances	W. E. Lowe	82	82	.....	1,900	36
Goderich	J. C. Griffin	41	15	26	570	546
Guelph	Jno. McNab	51	37	14	852	178
Gore Bay	S. Cronkhite	12	12	.....	650	.....
Hamilton	Jas. Ogilvie	778	178	600	4,445	9,695
Kingston	C. H. Corbett	92	21	71	733	3,478
Kitchener	J. Cook	98	28	70	661	1,738
Kenora	L. Myles	24	24	.....	542	.....
London	Jas. Carter	493	164	329	2,463	4,987
Lindsay	G. A. Balfour	30	11	19	337	476
L'Orignal	F. Millette	18	9	9	504	316
Milton	A. McGibbon	48	19	29	259	451
Napanee	W. E. Loyst	17	7	10	128	239
North Bay	W. J. Bailey	187	180	7	4,011	22
Ottawa	A. G. Dawson	957	298	659	5,363	10,217
Owen Sound	W. A. Grier	57	34	23	1,029	1,803
Orangeville	Chas. Bowles	34	7	27	90	4,633
Perth	John Oates	55	27	28	265	2,195
Picton	A. Huyck	23	8	15	37	69
Pembroke	Wm. Brown	95	37	58	1,056	1,948
Peterborough	H. Nesbitt	157	20	137	368	2,593
Port Arthur	Thos. Penfold	201	201	.....	4,819	.....
Parry Sound	J. A. Johnston	239	239	.....	2,049	.....
Simcoe	O. Robertson	36	25	11	467	496
St. Catharines	Geo. Bush	139	101	38	1,619	626
Sarnia	J. N. Dodd	205	24	181	828	4,855
Stratford	H. Nichol	48	21	27	804	879
Sandwich	W. A. Wanless	353	118	235	2,984	4,639
St. Thomas	W. F. Luton	77	30	47	688	693
Sault Ste. Marie	R. M. Hearst (acting)	273	273	.....	6,866	.....
Sudbury	S. Scott (acting)	846	846	.....	8,650	.....
Toronto	A. B. Chambers	5,055	732	4,323	11,968	18,830
Walkerton	D. McKechnie	52	27	25	473	975
Woodstock	Chas. Wilson	112	44	68	1,723	457
Welland	J. Kottmuir	302	145	157	2,724	1,656
Whitby	J. E. Schiller	62	47	15	1,548	755
Lock-ups:						
Atikokan	H. McDonald	.....	.....	.....	.....	.....
Byng Inlet	B. Moore	7	7	.....	.....	.....
Cobalt	A. T. Rowell	157	157	.....	.....	.....
Mine Centre	J. R. Gilbert	3	3	.....	.....	.....
Totals	.....	12,445	4,710	7,735	85,997	90,926

No. 8.

salaries of various gaol officials for the year ended 30th September, 1917.

Expenditure.					Salaries.			
Cost of fuel, food and clothing.	Cost of official salaries.	Cost of repairs.	Total gaol expenditure for the year.	Average cost per prisoner for entire gaol expenditure.	Gaolers.	Turnkeys.	Matrons.	Gaol surgeons.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,435 03	2,294 00	78 34	3,807 37	25 37	850 00	806 00	378 00	260 00
1,730 00	1,850 00	50 00	3,630 00	17 88	700 00	550 00	300 00	300 00
951 47	2,150 00	38 43	3,139 90	23 78	900 00	700 00	250 00	300 00
547 64	1,362 50	48 29	1,958 43	67 53	550 00	462 50	250 00	100 00
1,044 06	1,900 00	319 73	3,263 79	42 95	1,000 00	600 00	150 00	150 00
339 90	750 00	20 00	1,109 90	55 49	500 00	.....	100 00	150 00
761 72	832 00	76 62	1,670 34	64 24	600 00	.....	92 00	140 00
792 38	1,776 00	76 25	2,644 63	77 78	1,000 00	426 00	250 00	100 00
2,189 13	1,967 50	90 00	4,246 63	49 37	800 00	767 50	200 00	200 00
1,464 36	2,448 00	.....	3,912 36	22 61	800 00	1,240 00	208 00	200 00
681 34	1,480 00	.....	2,161 34	26 35	550 00	730 00	200 00	.....
1,108 61	1,670 00	.....	2,778 61	67 77	750 00	600 00	200 00	120 00
761 91	1,875 00	.....	2,636 91	51 70	800 00	675 00	300 00	100 00
601 52	735 00	9 35	1,345 87	112 15	450 00	135 00	150 00	.....
3,592 87	4,934 66	1,794 41	10,321 94	13 26	1,200 00	3,234 66	350 00	150 00
1,991 96	3,044 53	854 84	5,891 33	64 03	1,194 53	1,400 00	300 00	150 00
1,246 74	1,897 00	53 00	3,196 74	32 62	850 00	712 00	200 00	135 00
1,004 93	2,028 00	.....	3,032 93	126 37	600 00	1,028 00	200 00	200 00
3,250 00	4,541 00	647 60	8,438 60	17 11	1,000 00	2,471 00	720 00	350 00
271 00	1,750 00	.....	2,021 00	67 36	700 00	750 00	200 00	100 00
365 99	1,281 25	18 60	1,665 84	92 54	600 00	456 25	150 00	75 00
309 04	1,475 00	9 62	1,793 66	37 37	700 00	500 00	200 00	75 00
291 72	975 00	10 00	1,276 72	75 10	750 00	.....	150 00	75 00
1,231 40	3,010 00	144 72	4,386 12	23 45	650 00	2,035 00	175 00	150 00
4,455 41	5,618 57	386 69	10,460 67	10 93	1,500 00	3,318 57	500 00	300 00
1,435 00	2,100 00	150 00	3,685 00	64 65	800 00	750 00	300 00	250 00
689 18	1,500 00	112 67	2,301 85	67 70	700 00	500 00	200 00	100 00
1,243 78	2,100 00	104 41	3,448 19	62 69	1,000 00	800 00	200 00	100 00
143 91	975 00	.....	1,118 91	48 64	700 00	.....	200 00	75 00
849 90	2,180 00	.....	3,029 90	31 89	1,200 00	730 00	150 00	100 00
1,330 80	1,600 00	.....	2,930 80	18 66	750 00	550 00	150 00	150 00
2,720 91	4,090 00	188 95	6,999 86	34 82	900 00	2,640 00	300 00	250 00
569 01	1,580 00	25 00	2,174 01	9 10	600 00	730 00	100 00	150 00
429 02	1,475 00	52 90	1,956 92	54 35	600 00	600 00	200 00	75 00
778 20	2,170 00	110 00	3,058 20	22 00	1,000 00	720 00	300 00	150 00
757 64	1,904 50	95 18	2,757 32	13 45	687 50	720 00	297 00	200 00
706 24	1,810 00	33 57	2,549 81	53 12	800 00	600 00	260 00	150 00
3,071 76	2,696 00	668 85	6,436 61	18 23	800 00	1,425 00	271 00	200 00
1,587 65	2,171 25	.....	3,758 90	48 81	900 00	821 25	300 00	150 00
4,764 10	3,056 66	341 73	8,162 49	29 90	840 00	1,800 00	209 00	216 66
1,500 57	2,367 50	.....	3,868 07	4 57	1,055 00	912 50	250 00	150 00
11,904 93	18,658 67	334 07	30,897 67	6 11	2,200 00	14,564 67	894 00	1,000 00
478 79	1,500 00	100 00	2,078 79	39 97	700 00	450 00	250 00	100 00
1,528 52	2,196 33	695 46	4,420 31	39 46	900 00	936 33	260 00	100 00
1,692 63	2,777 90	144 40	4,614 93	15 28	885 00	1,460 40	232 50	200 00
1,368 42	1,750 00	.....	3,118 42	50 29	800 00	600 00	200 00	150 00
.....	150 00	.....	150 00	.....	150 00	.....	.....	.....
.....	300 00	46 51	346 51	49 50	300 00	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	300 00	.....	300 00	100 00	300 00	.....	.....	.....
71,971 09	115,053 82	7,930 19	194,955 10	15 66	39,562 03	55,907 63	11,687 50	7,896 66

TABLE No 9.

Showing the number of escapes and deaths, the Revenue derived from prison labour, the cost of diet, the accommodation of the various gaols and the highest and lowest number of prisoners in custody during the year ending September 30th, 1917.

Name of gaol.	Prisoners who escaped and evaded recapture.	Prisoners who escaped and were recaptured.	Prisoners who died.	Number of cells in each gaol.	Greatest number of prisoners confined in gaol at any time during the year.	Lowest number of prisoners confined in gaol at any time during the year.	Actual cash revenue derived from prison labour.	Cost of daily rations for prisoners.
							$ c.	Cents.
Barrie	1	2	.....	23	28	4	.....	13.75
Belleville	.....	.....	.....	38	19	1	.....	15.19
Brantford	2	1	.....	24	21	1	.....	12.50
Brampton	.....	.....	.....	25	5	1	.....	15.26
Brockville	.....	.....	.....	33	8	1	.....	11.20
Bracebridge	.....	2	.....	15	5	.....	.....	.....
Cayuga	.....	.....	.....	14	5	1	.....	13.00
Cornwall	1	1	.....	17	7	.....	.....	18.00
Cobourg	1	.....	.....	24	10	2	.....	15.00
Chatham	1	1	.....	38	23	6	.....	12.92
Fort Frances	1	.....	.....	10	14	1	.....	16.85
Goderich	.....	.....	.....	12	9	1	.....	26.50
Guelph	.....	.....	.....	18	7	.....	.....	12.75
Gore Bay	.....	1	1	12	5	1	.....	40.00
Hamilton	.....	.....	.....	60	75	14	.....	16.11
Kingston	.....	.....	.....	49	26	7	1,366 12	18.00
Kitchener	.....	.....	.....	20	19	2	.....	16.43
Kenora	.....	.....	.....	14	3	.....	.....	17.64
London	1	2	.....	57	43	10	.....	11.00
Lindsay	.....	.....	.....	24	8	.....	.....	17.75
L'Orignal	.....	.....	.....	18	4	1	.....	15.40
Milton	1	2	.....	18	6	.....	.....	21.09
Napanee	.....	.....	.....	18	4	.....	.....	12.96
North Bay	.....	.....	.....	20	23	6	.....	18.16
Ottawa	.....	.....	.....	93	71	23	1,336 95	13.50
Owen Sound	.....	.....	.....	32	12	4	.....	19.00
Orangeville	.....	.....	1	22	20	11	.....	24.50
Perth	.....	.....	1	18	11	3	.....	14.16
Picton	.....	.....	.....	18	2	.....	.....	12.00
Pembroke	.....	.....	.....	24	15	3	.....	12.50
Peterborough	.....	.....	.....	18	16	5	.....	14.87
Port Arthur	2	.....	1	40	34	8	.....	13.75
Parry Sound	1	1	.....	26	54	2	.....	15.47
Simcoe	.....	2	.....	18	7	.....	.....	16.25
St. Catharines	.....	.....	.....	38	17	1	.....	15.00
Sarnia	.....	2	.....	13	23	6	.....	12.19
Stratford	.....	2	.....	30	7	2	.....	14.40
Sandwich	.....	1	.....	58	37	8	.....	16.25
St. Thomas	.....	.....	.....	16	8	1	.....	13.74
Sault Ste. Marie	.....	.....	.....	23	32	8	.....	18.00
Sudbury	.....	.....	.....	22	46	8	.....	14.50
Toronto	.....	.....	.....	270	136	41	.....	14.33
Walkerton	.....	.....	2	24	9	1	.....	12.50
Woodstock	.....	1	.....	32	24	3	.....	10.23
Welland	.....	.....	.....	48	22	4	.....	15.33
Whitby	.....	1	.....	28	12	1	.....	17.37
Lock-ups:								
Atikokan	.....	.....	.....	3	.....	.....	.....	.....
Byng Inlet	.....	.....	.....	7	2	1	.....	40.00
Cobalt	.....	.....	.....	6	.....	.....	.....	.....
Mine Centre	.....	.....	.....	3	1	.....	.....	.....
Totals	12	22	6	1,531	.....	.....	2,703 07	.....

TABLE No. 10.

Showing the daily cost per prisoner in each of the gaols, exeluding the District Lock-ups, for the year ending September 30th, 1917.

Name of gaol.	Number of prisoners committed during the year.	Total days' stay of prisoners during the year.	Cost of fuel, food and clothing.	Average cost per day for each prisoner.
			$ c.	Cents.
Barrie	150	5,130	1,435 03	27.97
Belleville	203	3,342	1,730 00	51.76
Brantford	132	2,060	951 47	46.18
Brampton	29	831	547 64	65.90
Brockville	76	1,172	1,044 06	89.08
Bracebridge	20	647	339 90	52.53
Cayuga	26	758	761 72	100.49
Cornwall	34	713	792 38	111.13
Cobourg	86	2,330	2,189 13	93.95
Chatham	173	4,986	1,464 36	29.36
Fort Frances	82	1,936	681 34	35.19
Goderich	41	1,116	1,108 61	99.39
Guelph	51	1,030	761 91	73.97
Gore Bay	12	650	601 52	92.54
Hamilton	778	14,140	3,592 87	25.40
Kingston	92	4,211	1,991 96	47.30
Kitchener	98	2,399	1,246 74	51.96
Kenora	24	542	1,004 93	185.40
London	493	7,450	3,250 00	43.62
Lindsay	30	813	271 00	33.33
L'Orignal	18	820	365 99	44.63
Milton	48	710	309 04	43.52
Napanee	17	367	291 72	79.48
North Bay	187	4,033	1,231 40	30.53
Ottawa	957	15,580	4,455 41	28.59
Owen Sound	57	2,832	1,435 00	50.68
Orangeville	34	4,723	689 18	14.59
Perth	55	2,460	1,243 78	50.56
Picton	23	106	143 91	135.76
Pembroke	95	3,004	849 90	28.29
Peterborough	157	2,961	1,330 80	44.94
Port Arthur	201	4,819	2,720 91	56.46
Parry Sound	239	2,049	569 01	27.77
Simcoe	36	963	429 02	44.55
St. Catharines	139	2,245	778 20	34.66
Sarnia	205	5,683	757 64	13.33
Stratford	48	1,683	706 24	41.96
Sandwich	353	7,623	3,071 76	40.29
St. Thomas	77	1,381	1,587 65	114.96
Sault Ste. Marie	273	6,866	4,764 10	69.38
Sudbury	846	8,650	1,500 57	17.35
Toronto	5,055	30,798	11,904 93	38.65
Walkerton	52	1,448	478 79	33.06
Woodstock	112	2,180	1,528 52	70.11
Welland	302	4,380	1,692 63	38.64
Whitby	62	2,303	1,368 42	59.41
Totals	12,278	176,923	71,971 09	40.62

TABLE No. 11.

Showing the number of prisoners, male and female, sentenced during the year ending September 30th, 1917, and a comparison of the same with the current year.

Name of gaol.	No. of Prisoners sentenced during year ending 30th September, 1916.			No. of Prisoners sentenced during year ending 30th September, 1917.			Increase.			Decrease.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	160	6	166	126	2	128	.....	.....	.....	34	4	38
Belleville	135	9	144	98	1	99	.....	.....	.....	37	8	45
Brantford	176	3	179	49	1	50	.....	.....	.....	127	2	129
Brampton	5	1	6	10	.....	10	5	.....	5	.....	1	1
Brockville	119	20	139	34	4	38	.....	.....	.....	85	16	101
Bracebridge	12	.....	12	3	1	4	.....	1	1	9	.....	9
Cayuga	39	1	40	18	1	19	.....	.....	.....	21	.....	21
Cornwall	47	5	52	22	2	24	.....	.....	.....	25	3	28
Cobourg	119	3	122	52	.....	52	.....	.....	.....	67	3	70
Chatham	133	10	143	61	8	69	.....	.....	.....	72	2	74
Fort Frances	77	1	78	56	1	57	.....	.....	.....	21	.....	21
Goderich	26	.....	26	21	1	22	.....	1	1	5	.....	5
Guelph	51	2	53	37	2	39	.....	.....	.....	14	.....	14
Gore Bay	12	3	15	5	1	6	.....	.....	.....	7	2	9
Hamilton	1,130	78	1,208	503	30	533	.....	.....	.....	627	48	675
Kingston	178	13	191	69	5	74	.....	.....	.....	109	8	117
Kitchener	98	3	101	47	3	50	.....	.....	.....	51	.....	51
Kenora	17	1	18	11	3	14	.....	2	2	6	.....	6
London	479	23	502	246	30	276	.....	7	7	233	.....	233
Lindsay	12	.....	12	10	.....	10	.....	.....	.....	2	.....	2
L'Orignal	23	1	24	15	1	16	.....	.....	.....	8	.....	8
Milton	42	.....	42	15	.....	15	.....	.....	.....	27	.....	27
Napanee	43	2	45	13	.....	13	.....	.....	.....	30	2	32
North Bay	124	15	139	146	7	153	22	.....	22	.....	8	8
Ottawa	338	82	420	512	69	581	174	.....	174	.....	13	13
Owen Sound	60	4	64	39	2	41	.....	.....	.....	21	2	23
Orangeville	20	2	22	21	6	27	1	4	5	.....	.....	.....
Perth	51	3	54	34	.....	34	.....	.....	.....	17	3	20
Picton	12	.....	12	.....	.....	.....	.....	.....	.....	12	.....	12
Pembroke	103	3	106	78	3	81	.....	.....	.....	25	.....	25
Peterborough	89	18	107	47	8	55	.....	.....	.....	42	10	52
Port Arthur	272	18	290	133	14	147	.....	.....	.....	139	4	143
Parry Sound	696	5	701	152	.....	152	.....	.....	.....	544	5	549
Simcoe	67	1	68	15	1	16	.....	.....	.....	52	.....	52
St. Catharines	173	5	178	92	11	103	.....	6	6	81	.....	81
Sarnia	168	7	175	130	5	135	.....	.....	.....	38	2	40
Stratford	64	1	65	27	2	29	.....	1	1	37	.....	37
Sandwich	87	8	95	193	21	214	106	13	119	.....	.....	.....
St. Thomas	46	9	55	32	6	38	.....	.....	.....	14	3	17
Sault Ste. Marie	147	24	171	193	22	215	46	.....	46	.....	2	2
Sudbury	501	27	528	639	24	663	138	.....	138	.....	3	3
Toronto	1,953	406	2,359	2,996	117	3,113	1,043	.....	1,043	.....	289	289
Walkerton	21	.....	21	23	.....	23	2	.....	2	.....	.....	.....
Woodstock	147	3	150	69	2	71	.....	.....	.....	78	1	79
Welland	150	6	156	207	3	210	57	.....	57	.....	3	3
Whitby	52	.....	52	35	1	36	.....	1	1	.....	17	17
Lock-ups:												
Atikokan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Byng Inlet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cobalt	50	8	58	103	9	112	53	1	54	.....	.....	.....
Mine Centre	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	8,524	840	9,364	7,437	430	7,867	1,647	37	1,684	2,717	464	3,181

Fiftieth Annual Report

OF THE

INSPECTOR OF

Prisons and Reformatories

OF THE

PROVINCE OF ONTARIO

BEING FOR TWELVE MONTHS ENDING 31st OCTOBER

1917

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Parliament Buildings, Toronto, January 26th, 1918.

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I beg to submit herewith the Fiftieth Annual Report upon the Prisons and Reformatories being for the year ending 30th September, 1917.

I have the honour to be,

Your Honour's most obedient servant,

W. D. McPherson,

Provincial Secretary.

Toronto, November 14th, 1917.

Sir,—I have the honour to submit herewith, to be presented to His Honour the Lieutenant-Governor, the Fiftieth Annual Report upon the Common Gaols of the Province of Ontario, being for the official year ending 30th September, 1917.

I have the honour to be, Sir

Your obedient servant,

W. W. Dunlop,
Inspector.

The Honourable W. D. McPherson, M.P.P.,
Secretary of the Province of Ontario,
Toronto.

THE INDUSTRIAL FARM, BURWASH, ONT.

December 15th, 1917.

SIR,—During the past year there has been a change in Ontario Prison administration which has been almost radical in nature. Owing to the closing of the Ontario Reformatory at Guelph, most of the prisoners in custody at that Institution were transferred to this Institution, and newly sentenced men from all parts of the Province were sent to this Institution. For the first time, perhaps, in the history of the Province, we have an Institution without bars or cells, receiving into custody all the classes and types of prisoners who were formerly sent to the Central Prison, and later to the Ontario Reformatory. As you will note from the Statistical Return, it has been found feasible to take care of prisoners in this way. Instead of working in industries, the men, to a great extent, are employed in healthful outdoor work. Our discipline necessarily had to be strict, and we feel sure that it was of such a kind to appeal strongly to the great majority of the prisoners, and to the knowing public. Some of the prisoners naturally resented the change, but the great majority soon adapted themselves, and fitted into the whole scheme admirably. When the present plans are carried to completion, this Institution should be second to none as a place for properly showing the prisoner how to become a better citizen on discharge.

Toward the end of the year a school was started, and every illiterate prisoner is required to attend classes, and thus receives an elementary education. It is unnecessary to emphasize the importance of this, when you note from the Statistical Return that over one-quarter of our men were illiterate.

Most of our men were in prison for the first time, and I cannot too strongly emphasize the necessity of having another dormitory at No. 2 Camp, so that the first offenders may be kept separate from those who have been in prison more than once. I would also call your attention to the Table of Ages, and the comparatively large number of prisoners of almost tender years. Many of these youths had formerly been in Industrial Schools, and others were sentenced for the first time for theft of automobiles. Nearly one-third of the total number of men received were sentenced for breach of the Liquor Act.

It seems to me that the closing of the Institution at Guelph was very opportune, especially in view of the great need for additional production of foodstuffs. This Institution is essentially a farm, and what better work can our prison population be placed at, for at least some years, than helping to restore the world's supply of food, particularly in vegetables, beef and mutton?

Our organization is gradually being built up, and I wish to draw to your attention the loyalty and support that has been given by all the officers of the Institution.

I am convinced that we are following the correct procedure to obtain the best results for society and the men concerned, and we would be false to our trust, were we to change the reformative methods we have adopted.

I have the honour to be, Sir,

Your obedient servant,

C. F. NEELANDS,
Superintendent.

W. W. DUNLOP, ESQ.,
Inspector of Prisons and Public Charities,
Parliament Buildings, Toronto, Ont.

TORONTO MUNICIPAL FARM, LANGSTAFF, ONT.

W. W. Dunlop, Esq.,

Inspector of Prisons and Public Charities,
Parliament Buildings, Toronto.

Sir,—In presenting this, my first report on the Toronto Municipal Farm, I claim indulgence for its incompleteness from inception of the Institution. Prior to the year ending 30th September, 1916, records are lacking for the supply of such information as I should like to be contained in this Report, as commital papers were not being forwarded as is now done. Data relative to the disposition of inmates' employment is not available.

Soon after the establishment of the Toronto Industrial Farm in May, 1912, work for the erection of new and commodious premises was commenced, and for the most part of the time between May, 1912, and 1914, the majority of the inmates were occupied in supplying labour for the work, the remainder performing farm and kitchen work.

I enclose herewith statement showing the number of male inmates received at the Institution from May 15th, 1912, to September 30th, 1916, to be 2,542. Of this number, 1,677 were of Protestant religion, 803 were Roman Catholics, and 62 were of other denominations. During this period the number of inmates who escaped was 32—12 of whom evaded recapture, the remainder having been punished for their indiscretion. Also, during the above period there was only 1 death at the Institution.

Administration.—I have only praise for Sergeant Weir and the Administrative Staff, who had carried on under adverse conditions and was enabled by his co-operation, to perfect and place in operation the following changes:

As no inventory of live stock, tools, stores, implements, etc., were kept, my first operation on taking over was a thorough stock-taking on both Farms, and from this start an "expense store" was established to take over receipts and expenditures of "stores" and material, proper accounting and repairs. This has saved to date a large sum of money by preventing wastage and loss. This has also enabled me to order material ahead, and thus reap the benefit of the market by buying larger quantities on an advancing market.

Transportation.—Prisoners were transported from the Jail via. Canadian Northern Railway, arriving about three nights a week around 8.30 p.m., necessitating long hours for the Custodial Staff on those days, and costing 52 cents for each one-way fare. A change was made enabling the prisoners to arrive around eleven o'clock in the morning of any day, and costing 22 cents per single fare.

Habits.—Evidence of any traffic in drugs is entirely absent and the Jail Surgeon, Dr. C. P. Johns, is unceasing in his endeavour to correct the vicious habit of those addicted thereto. He has been instrumental in effecting some permanent cures, where the time permitted. In my opinion, more cures could be effected if longer terms were given habituaries to the drug habit.

Inmates now receive more personal liberty on the Farms, and remissions of sentence at the rate of five days in thirty is in force for deserving cases. This has had a grand effect on the maintenance of discipline, and permits a prisoner to help himself by earning time off sentence.

If the city remove the natural and legal difficulties, and allow of city food garbage being economically fed to hogs on the Farms, the time is in sight when

the Farms can be placed on a self-sustaining basis, and be capable of earning a handsome dividend for tax reduction purposes.

I wish here to thank all those earnest workers who have laboured so hard for the moral and spiritual uplift of the unfortunates undergoing detention on the Farms: the chief of whom are Major and Mrs. Fraser, Salvation Army; Rev. Father Kelly, Rev. Canon Green and Rev. J. W. Lawrence, who have given their utmost, and a host of others who have contributed both time and money to the entertainment on the Farms, and to help outgoing prisoners to obtain a footing in life, and to help the families and children to exist till their natural protectors are restored to them. The Salvation Army is to be commended for its wonderful work, which is producing excellent results.

Dietary.—From records instituted in July, 1917, I have compiled the following table on cost of food at Men's Farm:

	No. of Meals.	Cost all Meals per Month.	Average Cost each Meal.
July	17,127	$1,343 30	7⅞ cents
August	13,305	943 75	7 1/10 cents
September	10,971	710 56	6⅝ cents

Farming Operations.—I submit herewith Statement of Farming Operations, ending with the current year, of the different crops produced on both the Men's and Women's Farms at Concord and Langstaff. The results have much exceeded any previous year's history, and are due to the efficient work of the old farm staff and Mr. G. C. Ellis, the Farm Foreman, who wishes me to thank his staff for their unceasing labours and constant loyalty under unfavourable weather conditions.

RETURN SHOWING RESULT OF DIFFERENT CROPS FOR THE YEAR 1917 AT THE TORONTO MUNICIPAL FARMS, LANGSTAFF AND CONCORD, ONT.

FARM PRODUCE

Produce.	Acreage.	Crop.	Estimated Value.	Average per acre.
Barley	87	2,500 Bus.	$3,000 00	28.74 Bus.
Oats	204	8,000 "	5,200 00	33.33 "
Wheat	9	250 "	563 00	27.78 "
Corn (Silo)	44	150 Tons	1,500 00	3.41 Tons.
Hay	191	290 "	3,400 00	1.52 "
Straw	300	150 "	900 00	.5 "
Mangels	13	6,300 Bus.	2,900 00	461.54 Bus.
Potatoes	26	1,300 "	2,600 00	50.00 "
Turnips	9	3,000 "	1,200 00	333.33 "
Totals	583		$19,343 00	

Average value per acre, $33.16.

GARDEN AND HOE CROPS.

Produce.	Acreage.	Crop.	Estimated Value.
Beans		60 Bushels	$30 00
Beets		115 "	75 00
Cabbage		2,000 Head	100 00
Cauliflower		1,000 "	100 00
Carrots	9	170 Bushels	85 00
Cucumbers		45 "	22 50
Corn, Green, Table		170 Dozen	30 00
Peas		40 Bushels	20 00
Onions		30 "	70 00
Tomatoes		175 "	85 00
Total crop acreage	9	Total estimated value	$617 00

Average value per acre	$68 61
Grand total estimated value of crops	19,960 00

SUMMARY OF ACREAGE.

Farm produce	583 Acres		$19,343 00
Garden produce	9 "		617 00
Orchards	19 "		100 00
Bush	44 "		150 00
Occupied Land—Roads, Buildings, Fences; Horses, Cattle, Hogs, Sheep	21 "		5,744 78
Pasture	264 "	$12.00 per acre	3,168 00
Grand Total	940 "		$29,122 78

Average production per acre—both farms $30.98

I have the honour to be, Sir,

Your obedient servant,

MAJOR W. J. MORRISON,

Superintendent.

MERCER REFORMATORY, TORONTO, ONT.

December 22nd, 1917.

SIR,—I have the honour to submit the Annual Report of the Andrew Mercer Ontario Reformatory for Females for the year ending October 31st, 1917.

In presenting the Report this year it is fitting to draw special attention to the announcement by the Honourable W. D. McPherson, Provincial Secretary on the occasion of his first visit to the Institution (Sept. 14th, 1917) that the Andrew Mercer Ontario Reformatory is now rated an Improved Prison under The Prisons and Reformatories Act. By this Act "where, as a result of such inquiry the Board thinks proper, it may permit prisoners serving indeterminate sentences to be paroled under conditions approved of by the Minister of Justice;" also, an inmate "shall be entitled to earn a remission of a portion of the time for which she is sentenced, not exceeding five days for every month during which she is exemplary in behaviour, industry and faithfulness, and does not violate any of the prison rules; and if prevented from labour by sickness, not intentionally produced by (herself), (she) shall be entitled to earn, by good conduct, a remission not exceeding two and one-half days for every such month."

It has also been arranged to pay a small gratuity when services are worthy of remuneration and conduct good.

This admirable legislation will greatly benefit those committed to this Institution, and should be helpful in its administration.

The results of employing our inmates in working our small acreage of land, situate in the smoke and soot of a manufacturing district, have been such as to warrant the suggestion that their labour be used on a more extended scale in out-of-door occupations. With the world-wide cry for production of foodstuffs any suggestion making for additional supplies is surely welcome. I can state with confidence that eight or ten inmates under the officer who for three years has had charge of our inmate gardeners could successfully and profitably cultivate at least twenty-five acres of suitable land and look after poultry to the number of five or six hundred.

I would urge the serious consideration of such a branch for our Reformatory work. A point to be remembered is, that, provided the environment is desirable, the buildings could be of the simplest and the initial cost need not be embarrassing.

A further suggestion has been made that honey might be produced at small outlay, such work being particularly recommended as an out-of-door occupation for women.

Let me take this opportunity to thank most sincerely the many kind friends and well-wishers of the Reformatory who, very often at inconvenience to themselves, have given their time and thought to the inmates of this Institution.

My gratitude is also extended to the different clergymen who have so faithfully ministered to the religious needs of the inmates and to our veteran benefactor, Mr. Hugh MacMath and his staff of teachers for their constant attention to the Sunday School.

I have the honour to be, Sir,

Your obedient servant,

EMMA O'SULLIVAN,
Superintendent.

W. W. DUNLOP, ESQ.,
Inspector,
Parliament Buildings, Toronto.

THE ONTARIO REFORMATORY, GUELPH, ONT.

October 31st, 1917.

Sir,—During the past year another epoch in the Ontario prison annals has been closed. Owing to the present needs for more hospital accommodation, and facilities for Vocational Training for returned soldiers, it was decided to close the Ontario Reformatory at Guelph, and transfer the Institution to the Military Hospitals Commission. This was gradually done, and by July 26th, all the prisoners had been removed to other institutions. Most of the men were transferred to the Industrial Farm at Burwash, where the reformative influences are at least equally as good as those at Guelph. As a result, though the Ontario Reformatory is for the present closed, the good work will still continue.

When I took office in December, 1916, there were many plans in reference to the welfare and reformation of the prisoners that I intended to carry to completion. A few of these plans were completed, but on account of the impending change, many were not begun at all. Many of these proposed plans can be worked out at Burwash.

The one painful process in the closing of the Institution was the breaking up of the organization which had taken so many years to build, and which had been so successful as to achieve continental reputation as a live organization for showing men the way to a better citizenship. Some of the staff have gone to Burwash, some to other institutions, and some to other walks of life. As individual members of the staff we were friends as well as colleagues, and the parting was with deep regret. I wish to take this means of again thanking them and the members of the Industrial Staff for their hearty co-operation, and enthusiastic and loyal support.

Mr. McCrea and his faithful band of teachers and singers continued as in former years to direct the Sunday School meetings.

The Ministerial Association of Guelph supplied speakers for the afternoon services. Father Quirk weekly held services for the Roman Catholic portion of our population, and Major and Mrs. Fraser of the Salvation Army continued their untiring efforts for the better welfare of the boys. The services of all these workers have been deeply appreciated by prisoners and officers.

I wish to thank you and the other officers of the Provincial Secretary's Department for the real support given me during the year.

I have the honour to be, Sir,

Your obedient servant,

C. F. Neelands,

Superintendent.

W. W. Dunlop, Esq.,
Inspector of Prisons and Public Charities,
Parliament Buildings, Toronto, Ont.

TABLE No. 1.

Showing the number of prisoners in custody at the beginning of the year, the number received during the year, the number discharged, died, etc., and the number in custody at the end of the year, 30th September, 1917.

	In custody at the beginning of the year.	Committed during year.	Total number in custody.	Discharged on expiration of sentence.	Discharged by ticket-of-leave.	Discharged by Parole Board.	Discharged by payment of fines.	Discharged by remission of sentence.	Discharged by Order-in-Council.	Discharged by Minister of Justice.	Conditional discharges.	Other reasons.	Escaped.	Returned to gaols.	Transferred to penitentiary.	Transferred to hospitals for insane.	Transferred to other provincial institutions.	Released on Writ of Habeas Corpus.	Died while in custody.	Remaining in custody at end of year.
Ontario Reformatory	360	300	660	285	42	23	7	...	2	...	...	117	20	...	...	5	159	...	...	...
Ontario Reformatory—Clay Plant, Mimico	47	49	96	36	5	1	...	1	...	...	...	...	...	1	...	1	...	...	...	51
Industrial Farm, Burwash	....	734	734	284	49	16	9	...	16	...	...	11	27	2	...	...	6	...	2	312
Industrial Farm, Ft. William	27	89	116	77	...	...	5	2	...	1	3	...	4	7	...	...	...	...	...	17
Toronto Municipal Farm—Langstaff (males)	87	1,174	1,261	976	31	...	107	...	...	...	...	19	7	1	...	...	...	...	...	120
Toronto Municipal Farm—Langstaff (females)	70	321	391	263	2	...	72	...	...	...	...	...	...	...	...	...	3	...	...	51
Mercer Reformatory	107	107	214	66	43	...	...	...	...	...	...	4	...	...	...	...	5	...	...	96
Total	698	2,774	3,472	1,987	172	40	200	3	18	1	3	151	58	11	...	6	172	...	2	647

TABLE No. 2.

Showing Social Conditions.

Married	1,001
Single	1,654
Widow or Widowers	119
	2,774

TABLE No. 3.

Showing the Educational Status.

Read and write	2,309
Read only	24
Neither read nor write	441
	2,774

TABLE No. 4.

Showing the Habits of Prisoners.

Total abstainers	50
Moderately temperate	1,349
Intemperate	1,375
	2,774

TABLE No. 5.

Showing the Religions of Prisoners.

Anglican	616
Baptist	131
Congregational	5
Disciples	..
Hebrews	67
Lutherans	32
Methodists	404
Presbyterians	344
Roman Catholics	1,104
Greek Catholics	38
Salvation Army	4
Seventh Day Adventists	1
Mormons	1
Unitarians	2
No religion	18
Other religions	7
	2,774

TABLE No. 6.

Showing the Length of the Sentences.

One month	977
Two months	196
Three months	592
Four months	106
Five months	41
Six months	409
Eight months	4

Nine months	19
Ten months	5
One year	175
Fifteen months	58
Two years	87
Indefinite sentences	105
	2,774

TABLE No. 7.

Showing the Nationalities of the Prisoners.

Canadians	1,604
English	260
Irish	164
Scotch	129
Norwegians	1
Swedes	2
Italians	53
Bulgarians	4
Austrians	109
Germans	1
Russians	167
Servians	1
Hungarians	1
Grecians	8
Roumanians	7
Finlanders	29
Turks	1
Macedonians	8
Belgians	..
Danes	2
Chinese	9
Japanese	..
United States	177
Other nationalities	37
	2,774

TABLE No. 8.

Showing the Crimes for which Prisoners were Committed.

Crimes against the person:		
Assault	50	
Cutting, wounding, stabbing, shooting	13	
		63
Crimes against property:		
Arson and incendiarism	2	
Burglary, house-breaking and larceny	549	
Forgery	19	
Fraud and false pretences	54	
Horse stealing	5	
Receiving stolen goods	12	
Trespass	13	
Miscellaneous	1	
		655
Crimes against public morals and decency:		
Bigamy	26	
Inmates houses of ill-fame	19	
Keeping houses of ill-fame	89	
Perjury	5	
Seduction	3	
Indecent assault	62	
Miscellaneous	1	
		205

Offences against public order and peace:		
Alien enemies	35	
Escaping and obstructing constable	24	
Carrying unlawful weapons	5	
Drunk and disorderly	716	
Deserting and absenting from His Majesty's service	169	
Breaches liquor law	518	
Vagrancy	198	
		1,665
Other offences		186
		2,774

TABLE No. 9.

Showing the Occupations of Prisoners when Committed.

Agricultural	87
Commercial	520
Domestic	368
Labourers	1,132
Mechanics	629
Professional	2
No occupation	36
	2,774

Twenty-fourth and Twenty-fifth Report

of

Superintendent

Neglected and Dependent Children

of Ontario

Printed by Order of the Legislative Assembly

TORONTO
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1919

Printed by
THE RYERSON PRESS

To the Honourable Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to transmit herewith the twenty-fourth Annual Report of the Department of Neglected and Dependent Children of Ontario for the year ending December 31st, 1916.

Respectfully submitted.

WM. DAVID McPHERSON,

Provincial Secretary.

Parliament Buildings, Toronto.

Office of the

Superintendent of Neglected and Dependent Children of Ontario.
153 University Ave., Toronto.

March 15th, 1917.

The Honourable W. D. McPherson,

Provincial Secretary.

Sir,—I beg to submit herewith the Twenty-fourth Annual Report of the work of this office, under the Children's Protection Act of Ontario, being for the year ending December 31st, 1916.

I have the honour to be,

Sir,

Your obedient servant,

J. J. KELSO,

Superintendent.

ONTARIO

NEGLECTED DEPENDENT CHILDREN

TWENTY-FOURTH REPORT

TORONTO, March 2, 1917.

Splendid co-operative work has been done in the Province of Ontario by the Children's Aid Societies in an effort to protect and build up Canadians in all that makes for happy and useful careers. Never has the work of these Societies seemed so important as at this time, when the world's man power is being robbed of its best, and our officials, both paid and volunteer, have been earnestly endeavouring to help these children, often neglected and wayward, so that later on they may assist in filling the depleted ranks. The work of each society would in itself fill a small volume, and from the few statistics given here, only those intimately connected with the work can at all gauge their significance. The scope of the work is wide, but the main idea is to improve existing social conditions where child progress and welfare is hampered. Parents have been assisted to care for their children, and only when they failed to respond did it become necessary to separate children from them. Much advice and assistance has been given to social workers and prompt attention assured to every needy child.

From an economic point of view, apart altogether from the moral aspect, the work cannot be overestimated. The country has been saved thousands of dollars in the reclaimed boys and girls who would otherwise be dependent and useless, if not indeed criminal—and improved citizens add to the wealth of a country more than any other product.

The Children's Aid Society movement has also been one of the potent forces in fighting feeble-mindedness and degeneracy.

There are sixty-two Children's Aid Societies in active operation, preventing the neglect of children and the consequent breaking up of homes. Without disturbing unduly the home relationships, the Children's Aid touched during the year in various helpful and healing ways the lives of thousands of children.

The number made wards of the Societies by order of the courts was eight hundred and ninety-four from the entire Province. This table will afford means of comparison with other years:

In 1912 there were 897 children made wards; in 1913 the number was 1,017; in 1914 the number was 904; while last year, as given above, the number was 894.

According to sex the figures show, males, 439; females, 455; Protestants, 763; Roman Catholics, 131; legitimate, 719; illegitimate, 175.

Where Children Came From.

That all parts of the Province contribute their quota of neglected children is made clear by the following table showing the cities and counties from which children were made wards:—

Brant	14	Perth	6
Bruce	12	Peterboro	11
Carleton (Ottawa)	114	Renfrew	9
Dufferin	1	Simcoe	28
Northumberland and Durham	19	Stormont, Dundas and Glengarry	6
Elgin	18	Victoria	9
Essex	13	Waterloo	23
Frontenac	6	Welland	26
Grey	23	Wellington	25
Haldimand	8	Wentworth	34
Halton	14	York	27
Hastings	37	Toronto	98
Huron	10	St. Vincent de Paul	5
Kent	17	Algoma	11
Lambton	15	Kenora	5
Lanark	14	Nipissing	10
Leeds and Grenville	21	Parry Sound	16
Lennox and Addington	5	Sudbury	17
Lincoln	10	Temiskaming	7
Middlesex	41	Thunder Bay	24
Norfolk	23	Muskoka	6
Ontario	30		
Oxford	16	Total	894
Peel	10		

Parental Records.

	Father.	Mother	Both.
Criminals	10	1	..
Deserters	24	15	15
Drunkards	4	2	1
Immoral	2	8	3
Parent deceased	27	32	22
Insane	2	9	..
Weak-minded	..	5	3
Cruel	6	..	2
Depraved	1	..	19
Crippled	..	1	..
In House of Refuge	1	..	2
Parents unable to support	7		
Neglect and cruelty in foster home	12		

In nearly every case of depravity, cruelty of father, or immorality of mother, drinking was included in the misconduct.

Twenty-two of the children dealt with were mentally or physically defective.

Ages of Children When Committed.

1 year or under	150	9 years or under	54
2 years or under	75	10 " "	54
3 " "	57	11 " "	64
4 " "	49	12 " "	49
5 " "	51	13 " "	56
6 " "	41	14 " "	45
7 " "	38	15 " "	28
8 " "	59	16 " "	23

How Disposed Of.

Placed in foster homes	432	Placed in St. John's Industrial School	1
Placed in Shelter temporarily	184	Placed in St. Mary's Industrial School	3
On probation with parents or relatives	160	Placed in Orillia Asylum	1
Transferred to relatives	82	Enlisted	1
Placed in Alexandra Industrial School	7	Deceased	17
Placed in Victoria Industrial School	6		

Supervision.

The work of supervision is most important, because it is our guarantee to the public that children committed to the Society's care will not be merely passing from one condition of neglect to another. Close oversight is maintained, and not only many visits paid, but thousands of letters written enquiring, advising, admonishing, and planning for special training, wages, pocket money, etc.

During the year 1916 there were 4,977 children visited in foster homes, and 365 in shelters, and 587 others were either seen or directly heard from. A large number of children are so definitely and permanently established in their homes that it became necessary to cease the official visits. These children are heard from through foster parents reporting privately on their progress.

Up to the end of 1916 there were 592 boys who enlisted.

There has been no juvenile immigration, nor is there likely to be for some years to come.

The work of the four Industrial Schools for the training of delinquent children has been carried on along the usual lines, and without change in the personnel of management.

List of Active Workers.

Children's Aid Societies, Ontario,

January, 1916.

Society.	President.	Treasurer.	Agent.
Sault Ste. Marie..	T. E. Simpson	R. G. Campbell...	J. P. Reed.
Brantford	Dr. Chas. Leeming.....	C. Cook	J. L. Axford.
Bruce co.	J. Morgan.....	W. A. Burrows....	Rev. R. Perdue, Walkerton.
Carleton co.	W. L. Scott	Col. Taylor	John Keane, Ottawa.
Dufferin co.	T. Henderson	T. S. Little.....	H. F. Tuck, Orangeville.
Elgin	F. B. Holtby.....	F. M. Griffin	Mrs. Caughell, St. Thomas.
Essex	A. McNee	W. C. Kennedy...	W. F. Hackney, Windsor.
Fort William.....	A. Snelgrove	H. Murphy	F. Blain, Ft. William.
Frontenac	Dr. A. Richardson.....	O. V. Bartels	John Pollie, Kingston.
Grey	H. H. Burgess	Mrs. Carrie	A. E. Trout, Owen Sound.
Haldimand	.....	.....	.....
Hamilton	W. H. Wardrope	Mrs. C. A. Hunter.	W. H. Wyllie, Hamilton.
Hastings.....	Thos. Ritchie.....	H. F. Ketcheson..	T. D. Ruston, Belleville.
Huron.....	J. Mitchell.....	R. G. Reynolds...	G. M. Elliott,Goderich.
Kenora	Rev. J. O. Lindquist....	Mrs. J. A. Horan..	Mrs. S. Saylor, Kenora.
Kent.....	P. S. Coate.....	Sheriff Gemmell..	W. R. Baxter, Chatham.
Lambton.....	Geo. A. Proctor.....	F. C. Watson.....	John Wilkinson, Sarnia.
Lanark.....	J. J. Marsh.....	J. T. Pearson.....	Wm. Hyndman, S. Falls.
Leeds & Grenville.	A. C. Hardy	C. E. Baynes-Reed	Alex. Beattie, Brockville.
Lennox & Addington.....	Alpine Woods	Mrs. A. W. Grange	F. W. Barrett, Napanee.
Lincoln.....	C. H. Claus	Mrs. H. Rogers...	R. E. Boyle, St. Catharines.
Middlesex.....	Sheriff Cameron.....	John Hunt.....	W. E. Kelly, London.
Nipissing.....	J. M. Deacon	E. C. Rheaume...	W. W. Ryan, North Bay.
Northumberland and Durham...	J. W. Bickle	R. Gray	Jas. Daley, Port Hope.
Norfolk.....	Frank Reid	Geo. Williamson..	D. E. McIntosh, Simcoe.
Ontario.....	Rev. J. Garbutt	J. H. Dent	H. W. Elliott, Oshawa.
Oxford.....	J. R. Shaw	.....	Mrs. Pedley, Woodstock.
Parry Sound, E...	H. Knight	F. Metcalfe	J. Hartill, Burk's Falls.
Parry Sound, W..	F. Tasker	W. A. Bourne....	Jos. Ryder, Parry Sound.
Peel and Halton..	C. D. Gordon	W. S. Morphy....	C. W. Norton, Brampton.
Perth.....	Sheriff Magwood	R. T. Mussen.....	Hugh Ferguson, Stratford.
Peterborough....	E. A. Peck	Horace Wakley...	G. W. Powell, Peterborough
Port Arthur.....	Geo. Gibbon	A. G. Alexander..	Geo. Gibbon, Port Arthur.
Prescott & Russell	J. Hartley.....	.....	Rev. P. A. McEwen.
Prince Edward...	W. J. Carter	A. E. Wilson.....	Geo. Hubbs, Picton.
Renfrew.....	Rev.W. H. Quartermaine	E. J. Stewart ...	Rev. W. H. Quartermaine.
Simcoe.....	Sheriff Harvey	G. M. Upham.....	W. J. Justice, Barrie.
Stormont, Dundas & Glengarry....	W. A. Craig	H. B. Fetterly....	T. W. Ault, Cornwall.
Sudbury.....	Mrs. Frawley.....	Dr. Patterson....	G. Elliott, Sudbury.
Temiskaming....	H. S. Browning.....	Geo. T. Smith....	R. Leheup, Haileybury.
Victoria.....	G. H. M. Baker	Mrs. Milne.....	Mrs. Sharpe, Lindsay.
Waterloo.....	Rev. T. Spetz.....	W. R. Strickland.	A. Pullam, Hespeler.
Welland.....	R. Cooper	.....	.....
Wellington.....	Sheriff Allen	T. G. McMaster...	Amos Tovell, Guelph.
York.....	G. S. Henry, M.P.P. ...	W. D. Annis.....	R. Coulson, Toronto.
Toronto.....	J. K. MacDonald.....	A. M. Campbell...	W. Duncan, Toronto.

CHILDREN'S AID REPORTS

Following is a condensed report of the work carried on by the various organizations:

ALGOMA, SAULT STE. MARIE.

The adjourned annual general meeting of the Children's Aid Society of Sault Ste. Marie and the District of Algoma was held in the Council Chamber on Monday, October 23rd, at 4.30 p.m. The chair was occupied by the President, Mr. T. E. Simpson, and Mr. J. P. Reed acted as secretary.

The minutes of the last annual meeting were read and confirmed.

Inspector Reed's report for the year ending September 30th, 1915, was read and adopted on motion of Rev. W. S. G. Bunbury, seconded by Mrs. J. P. Kemp, and incorporated with the motion with an expression of gratefulness to the secretary and inspector for all the work he is doing.

Treasurer Campbell's report was next read and referred to the auditors on motion of Mr. S. W. Fawcett, seconded by Mrs. M. C. Aubin.

Receipts.

Balance from last year	$85 39
Maintenance	2,429 25
Memberships and subscriptions	1,051 56
Shelter and Temporary Home Committee	294 76
Lodges, societies, etc.	413 75
Municipalities	180 00
Women's Institutes	11 00
Mite boxes	58 06
Rent, Biggings Ave. property	45 00
Schools and Sunday Schools	22 40
Campaign Building Fund	210 12
Sale of live stock, etc.	225 53
Bequest, John Dawson, Esq.	300 00
Total receipts	$5,326 82

Expenditures.

General expenses:—

Postage, stationery and advertising	$104 06
Salary	300 00
Telephone	26 90
Office supplies	34 70
Fee, Provincial Association	5 00
Total	$470 66

Shelter expenses:—	
Fuel, Light and Power	$507 77
Provisions	1,128 83
Clothing	261 15
Furniture and repairs	481 95
Live stock account	471 24
Drugs and eye-glasses	54 81
Telephone	84 35
Salaries	1,046 33
Insurance	20 00
Taxes	42 10
Interest	544 00
Total	$4,642 53
Total expenditures	$5,113 19
Balance on hand	$213 63

R. G. Campbell, *Treasurer.*

Officers for the Year.

President—T. E. Simpson.
First Vice-President—L. A. Hinsperger.
Second Vice-President—F. A. King.
Third Vice-President—Mrs. T. Fraser.
Secretary and Inspector—J. P. Reed.
Treasurer—R. G. Campbell.
Honorary Solicitor—W. G. Atkin.
Honorary Physician—A. A. Shepard, M.D.
Honorary Dentist—H. F. Goodfellow, D.D.S.

BRANT COUNTY, BRANTFORD.

The annual meeting of the Brantford Society was held on 5th December, 1916, and in the absence of Dr. Charles Leeming, the chair was occupied by Mr. Jos. Ruddy, who in his opening remarks stated that if he had been requested to speak, he would have chosen a subject referring to the value of the child to the community. An evidence of the benefit derived from the care of children by the institution was that since the declaration of war from six hundred to eight hundred persons who had at one time been wards of the Society were serving under the Union Jack, who would otherwise have probably grown up to be burdens on society and useless citizens of the community.

Mr. Axford's Report.

Brantford, Dec. 5, 1916.

Mr. President, Ladies and Gentlemen—It is again my privilege to present to you the following report for the year ending Oct. 31st, 1916.

Applications for children	191	Children returned to parents (not wards)	34
Children brought to Shelter (not wards)	42	Children in temporary homes	6
Children placed on parole (not wards)	2	Children involved during year	358
		Children made wards, C.A.S.	15

Children sent to Industrial School	1	Wards married	7
Complaints received	217	Children in Shelter during the year	129
Investigations	195	Total days' stay of the children	3,347
Mail received	622	Average days' stay	26
Mail sent out	1,738	Average number per day	9
Meetings addressed	6	Children in once	108
Mileage (approximate) covered	4,625	Children in twice	13
Office interviews	420	Children in three times	2
Phone interviews	936	Children in four times	4
Court attendance	35	Children in six times	1
Wards in foster homes heard from	157	Children in ten times	1
Wards placed out	74	Placed in Indian schools	3
Wards returned to Shelter	62	In Laycock	1
Wards visited	140	In Victor Home	1
Warnings given	179	Total office receipts	$1,056 90

Election of Officers.

The next item on the programme of the proceedings was the election of officers, and this was expeditiously carried out by the submission and acceptance of the report of the nominating committee, which was as follows:—

Honorary President—Mrs. Peter Wood.

President—Dr. Charles Leeming.

Vice-Presidents—E. L. Cockshutt, R. Sanderson.

Recording Secretary—Miss Sarah Brown.

Secretary and Inspector—J. Leslie Axford.

Treasurer—Mr. C. Cook.

Executive—Rev. Woodside, Joseph Ruddy, W. H. Whittaker, Rev. Dr. Brady, Sheriff Westbrook, Mrs. John Ker.

BRUCE COUNTY.

The annual meeting of this Society was held at Walkerton on 12th October, 1916, when the following officers were appointed for the ensuing year:—

President—J. Morgan.

Secretary—Rev. D. McLennan.

Treasurer—W. A. Burrows.

Solicitor—D. Robertson, K.C.

Members of Board—Mrs. D. Robertson, Mrs. J. Rowland, Mrs. Skelton, Mrs. Roether, Jas. Warren, Mrs. Judge Klein, Mrs. Benton, Mrs. Wingfeller, H. Willoughby, Rev. R. Perdue.

The treasurer submitted his financial statement as follows: Total receipts, $782.62; expenditure, $612.31; leaving a balance on hand of $170.31.

CARLETON COUNTY, OTTAWA.

October 12, 1916.

The annual general meeting of members, subscribers and friends of the Children's Aid Society was held to-day in the City Hall. Those present were:—

Sir Louis H. Davies, K.C.M.G., Sir H. K. Egan, Col. Irwin, C.M.G.; Mr. W. L. Scott (President); Mr. John Gorman, Mr. W. S. Holmes, Mr. A. H. Whitcher, Mr. J. S. McEwen, Mr. A. A. Dion, Rev. J. H. Turnbull, Mr. J. F. Orde, Rev. J. F. Gorman,

Mr. G. B. Smart, Mr. H. G. Guppy, Mr. C. H. Stapledon, Mr. Jas. Phelan, Mr. G. H. Watkinson, Mr. Thos. McKenna, Mr. J. A. Reymond, Mr. John Keane (Secretary), Mrs. C. H. Thorburn, Mrs. W. A. Leggo, Mde. Boisvert, Mrs. J. M. Courtney, Mrs. A. J. Freiman, Mrs. J. McCaw, Miss Mansfield, Miss Sadlier, Mrs. G. H. Burland, Mrs. W. White, Miss N. Watkinson, Mde. Bruchesi, Mrs. J. A. Reymond, Miss Cassaday, and others.

Mr. W. L. Scott assumed the chair, called the meeting to order, and asked for the minutes of the last annual meeting. A printed copy was laid upon the table and they were taken as read and confirmed, after which the following officers, etc., were elected.:—

PATRON AND PATRONESS.

Their Excellencies the Duke and Duchess of Devonshire.

OFFICERS FOR THE YEAR 1916-17.

President—Mr. W. L. Scott.

Vice-Presidents—Sir Louis H. Davies, K.C.M.G., Mr. John Gorman, Col. Irwin, C.M.G., Rev. Father Lapointe, Madame L. N. Rheaume,, Mrs. C. H. Thorburn.

Honorary Treasurer—Lt.-Col. P. B. Taylor.

Honorary Assistant Treasurer—Mr. W. S. Holmes.

Secretary—Mr. John Keane.

Council—Madame. Boisvert, Rev. W. P. Boshart, Dr. Mary Bryson, Mrs. G. H. Burland, Mr. T. H. Burns, Mrs. J. M. Courtney, Mr. J. D. Denny, Mr. A. A. Dion, Mr. W. W. Edgar, Mr. Gustave Emond, Rev. Father Forest, Mrs. A. J. Freiman, Rev. A. Gordon, Rev. J. F. Gorman, Mr. J. C. Harterre, Mrs. F. A. Heney, Miss Horne, Mrs. Idington; Mrs. P. Larmonth, Mrs. W. A. Leggo, Mrs. Allan Mather, Mrs. J. McCaw, Mrs. Chas. McGreevy, Mrs. J. P. McLaren, Mr. J. S. McEwen, Miss Mansfield, Rev. W. A. Read, Mrs. A. Robertson, Miss Rothwell, Miss Sadlier, Miss M. McKay Scott, Mrs. Adam Shortt, Mr. G. Bogue Smart, Mrs. N. C. Smillie, Rev. Fr. Theriault, Rev. J. H. Turnbull, Mr. A. H. Whitcher, Mrs. W. White.

Representatives of Institutions—St. Patrick's Asylum—Mr. J. C. Enright; St. Joseph's Orphanage—Mde. Rheaume; Protestant Orphans' Home—Miss I. Stewart, Mrs. C. H. Thorburn.

Probation Officers—Mde. J. Bruchesi, Miss M. Cassaday.

Visitor—Mr. J. A. Reymond.

Auditor—Mr. Wm. Kearns.

Honorary Solicitors—Mr. Louis Coté, Hon. Chas. Murphy, Mr. D. J. McDougal, Mr. J. F. Orde, K.C.

Honorary Physicians—Dr. Mary Bryson, Dr. J. L. Chabot, Dr. Elizabeth Embury, Dr. Thomas Gibson, Dr. C. E. Preston.

(The above also constitutes the Officers and Council of the County of Carleton Children's Aid Society.)

Mr. Keane, the Inspector of the Society, then submitted the following report:—

TWENTY-THIRD ANNUAL REPORT OF THE CHILDREN'S AID SOCIETY OF OTTAWA, FOR THE YEAR 1915-16.

In reviewing the work for the past twelve months and recalling our operations we have, amidst all the distractions caused by the war, to remember that, war or no war, the task of caring for neglected and dependent children does not cease or even diminish. On the contrary, whilst we had thought last year was an exceptionally heavy one, it is found that this year exceeds it a good deal. Some conception may be had when we say that from last year's report of the City Society, 91 children were taken under our

control and 9 from the County, making a total of 100. This year 112 were taken from the city and 22 from the County of Carleton, making a total of 134 in all. Of these a few figures may be given:—

Foster homes found for former wards	64
Homes for new wards	85
Placed with parents	32
Sent to Industrial School	6
Married	4
Died	5
Sent to Eastern Hospital	1
Address not found, Xmas, 1915	5

Of those committed.....64 were boys
" " .....48 were girls——112

Reasons for committal.

Incorrigible	9	
Delinquent	17	
Foundling	1	
Neglected	44	
Transferred by parents	16	
Desertion by parents	25	——112

COUNTY OF CARLETON WARDS.

Foster homes found for former wards	7
Homes for new wards	16
Placed with parents	2
Sent to Industrial School	1
In Shelter	2
Died	1

Of those committed.....12 were boys
" " .....10 were girls—— 22

Reasons for committal.

Delinquent	1	
Foundling	1	
Neglected	18	
Transferred by parents	1	
Desertion by parents	1	—— 22

HONORARY TREASURER'S STATEMENT OF RECEIPTS AND EXPENDITURE FOR YEAR ENDING 30TH SEPTEMBER, 1916.

RECEIPTS.

Cash on hand from 1914-15		$409 91
Subscriptions	$1,467 75	
Refunds	12 34	
Re special case	6 00	
Interest	9 23	
		1,495 32
		$1,905 23

EXPENDITURES.

Salaries	$1,099 91	
Printing and stationery	104 50	
Telephone account	37 50	
Car fare and travelling expenses	207 78	
Sundry accounts	175 42	
Cash in bank	280 12	
		$1,905 23

W. S. HOLMES, *Asst. Hon. Treasurer.*

ELGIN COUNTY, ST. THOMAS.

OFFICERS FOR THE YEAR 1916-17.

President—F. B. Holtby.
First Vice-President—Dr. C. W. Marlatt.
Second Vice-President—W. J. Shaw.
Third Vice-President—G. K. Crocker.
Fourth Vice-President—C. St. Clair Leitch.
Secretary—H. S. Wegg.
Treasurer—F. M. Griffin.
Other Members of Board—W. Trott, Mayor of St. Thomas; F. Pineo, Warden of Elgin; K. W. McKay, County Clerk; W. G. Mann, Aylmer; A. McCallum, Dutton; Miss Farley, Mrs. Crocker, Mrs. Pegler.

St Thomas, Oct. 24th, 1916.

The annual meeting of the United Children's Aid Societies of St. Thomas and Elgin was held at the Shelter with a good attendance. The president, Dr. C. W. Marlatt, occupied the chair.

The minutes of the last annual meting were read and adopted.

The secretary's report was read by H. S. Wegg and adopted on motion of C. K. Crocker and F. M. Griffin.

The treasurer, H. S. Wegg, read his report, which was adopted on motion of Mrs. Griffin and Miss Brierley.

C. F. Maxwell, Esq., addressed the meeting, expressing his sympathy with the objects of the Society and his desire to co-operate with it in his official capacity as city magistrate.

After the election of officers, President-Elect Holtby took the chair and referred briefly to matters which will shortly require the attention of the Society, including new arrangements regarding the rate of maintenance chargeable for children, and the securing of an increased grant. He also expressed his satisfaction with the Society's present matron, Mrs. F. Snyder.

It was moved by H. S. Wegg, seconded by F. M. Griffijn, and carried unanimously:—That the Society do record its appreciation of the devoted service rendered during the past six years by the retiring president. Dr. Marlatt replied with assurances of his continued sympathy and assistance.

TREASURER'S ANNUAL STATEMENT.

Receipts.

Balance for'd Oct. 15th, 1915	$174 41
Membership fees	9 25
Donations	150 00
Municipalities, etc., for board of children	1,138 26
Rummage sale	259 05
Municipal grants (city and county)	475 00
Dividends bequest, P. Couse estate	60 00
Sundry	21 57
	$2,287 54

Disbursements.

Salary of secretary and agent	$400 00
Matron for board of children, etc.	1,030 97
Travelling expenses, telephone, etc.	100 84
Upkeep of building, furniture, etc.	194 51
Printing, advertising, stationery and postage	123 40
Fuel and gas	78 76
Clothing and sundries	175 99
Medical and miscellaneous	25 65
Balance forward Oct. 16th, 1916	157 42
	$2,287 54

Assets.

Cash on hand	$157 42
Accounts receivable	372 10
Grants receivable	225 00
Real estate, Shelter	3,300 00
Furnishings	300 00
	$4,354 52

Liabilities.

Surplus	$4,354 52
Trust accounts (held for wards)	253 90

H. S. WEGG, *Treasurer.*

Your auditors have checked over books and vouchers and found everything correct.

GEO. K. CROCKER.
F. B. HOLTBY,

Auditors.

ESSEX COUNTY, WINDSOR.

Officers.

Hon. President and Life Member—Mr. Linsell.
Hon. Solicitors—A. R. Bartlett, E. A. Cleary, F. W. Wilson.
Hon. Physicians—Dr. Totten, Dr. Fuller, Dr. Carney, Dr. Campbell, Dr. H. Reaume, Dr. Flock, tuberculosis specialist.
President—Mr. A. McNee.
First Vice-President—Gordon McGregor.
Second Vice-President—E. G. Henderson.
Treasurer—W. C. Kennedy.
Secretary—F. M. Allworth.
Inspector—W. F. H. Hackney.

Inspector's Report.

Mr. President and Gentlemen:—

I have the honour to submit to you my fourth annual report of the work accomplished on behalf of neglected, ill-treated, dependent and delinquent children for the year ending December 31st, 1916

The year which has just drawn to a close has been one of steady development and progress, in the various departments of work, caring for the neglected, dealing with the delinquent, providing foster homes for the homeless, assisting the diseased and deformed, and prosecuting those guilty of crimes against children. The aim of the Society has been to give every child a chance in accordance with the general principles set forth in The Children's Protection Act.

Supervision and Probation.

In the discharge of this work 1,984 visits have been made by your Inspector to the homes of neglected and delinquent parents; in addition I have made 196 attendances at police court in the interests of children, 82 of whom have been placed on parole for various offences.

Shelter.

Fifty-nine children have been cared for in the above institution, but I think the time has come for us to obtain a small parcel of ground outside the city and build a Shelter that would be more adapted to our needs. Our present building has done admirably, but there is such a need of a much larger building, where boys and girls could be separated and where children could be boarded for temporary periods to assist women who are compelled to work, perhaps through the loss of the husband.

Before closing my report I desire to place on record my appreciation of the valuable services rendered by the undermentioned:—

Dr. Cruickshank, M.O.H.; Dr. R. Carney, City Physician; Dr. Campbell, Dr. Fuller, Dr. Brien and Dr. Totten, Hon. Physicians; G. J. Leggatt, Police Magistrate; J. H. Rodd, Crown Attorney; E. A. Cleary and F. W. Wilson, Hon. Solicitors; The Girls' Friendly Society of All Saint's Church; Mr. and Mrs. Gordon McGregor, Mr. and Mrs. W. C. Kennedy, Mr. and Mrs. W. R. Campbell; Mr. W. Wheeler, Sanitary Inspector; and J. J. Kelso, Provincial Superintendent.

Acknowledgment should also be made of the courtesy and assistance which the Society has received from Chief of Police Mills, Inspector M. Wigle, and all members of the City, County and Provincial Police Department, the Press, and to all our friends and supporters I desire to tender my sincere thanks.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31ST, 1916.

Receipts.

Balance brought forward	$395 08	
Subscriptions, city of Windsor, town of Walkerville, county of Essex, and personal	2,425 00	
Bank interest	4 80	
		$2,824 88

Disbursements.

Salary probation officer	$1,500 00	
General and travelling expenses	637 91	
Board	244 00	
Repairs	53 86	
Printing	30 25	
Balance in bank	358 86	
		$2,824 88

I have examined the books of the Children's Aid Society and found them correctly kept. Vouchers were produced for all disbursements.

HARRY RUSH, *Auditor.*

FORT WILLIAM.

At the annual meeting of the Society held in the Public Library, Fort William, yesterday, the following officers and executive were elected for the ensuing year:—

President—A. Snelgrove, Esq.

Vice-President—Mrs. Layburn.

Treasurer—H. Murphy, Esq.

Hon. Solicitor—John A. Dyke, Esq.

Secretary—Frank Blain.

Executive—The officers, resident clergymen, and Mrs. John King, Mrs. R. C. Morgan, Mrs. W. J. Hicks, Mrs. Fife, Mrs. Garrity, Mrs. T. Love, C. W. Jarvis, Esq., G. H. Williamson, Esq.

FINANCIAL STATEMENT, 1916.

Receipts.

Balance at credit, Bank of Montreal, Jan. 1st	$97 25
Provincial Government maintenance	368 40
Other maintenance	57 00
Returns	18 60
Port Arthur adjustment	282 93
Christmas special	22 00
Discount	0 30
Fort William, grant to June 30th	1,200 00
Fort William, by payment of accounts	2,057 64
	$4,104 12

Expenditures.

Various accounts, as per list		$3,854 57
Travelling expenses		75 00
Christmas special		22 00
		$3,951 57
Balance at credit Bank of Montreal, Dec. 31st, 1916...	$140 40	
Less outstanding cheque	3 00	
		137 40
Cash on hand		15 15
		$4,104 12

There are several things in our report for the year 1916 for which we are grateful. While the action taken by Port Arthur in withdrawing from the Society and establishing a separate Shelter in Port Arthur was the cause of considerable anxiety to us, we note that it was preparatory to a larger work in Fort William. Whereas in 1915 the admissions of children from Fort William to the Shelter were 12, in 1916 there were 30. The ability to receive needy children at once and care for them without delay has broadened and enriched our work. The Shelter to-day is fulfilling its mission to the community more promptly, effectively and satisfactorily than in any previous year.

GREY COUNTY.

The adjourned annual meeting of the Children's Aid Society was held in Knox Church auditorium on Wednesday evening last and was very well attended. The report of the local agent, Mr. A. E. Trout, and the address by Mr. J. J. Kelso, the provincial secretary, were interesting features of the evening.

The first business was the reading of the minutes of the last meeting, which were adopted.

Mr. H. H. Burgess, president of the local organization, spoke briefly of the work of the Society in the county, the effort to prevent unfavourable conditions rather than the correction afterwards, although the latter was also frequently necessary. This work was carried out in the homes, schools and throughout the whole community and was of the highest value.

Mr. J. K. Christie was called upon to read the report of the nominating committee, which recommended that the following officers be elected for the ensuing year:—

Hon. President—Mr. R. B. Miller.

President—Mr. H. H. Burgess.

Vice-Presidents—The Warden of the County, the Mayor of Owen Sound, Rev. Cadman, R. J. Doyle, Judge Sutherland, Mr. Wm. Douglass, Mr. R. G. McKay, Dr. Taylor, Mr. Campbell, and Mr. Godfrey.

Secretary—Miss Annie Dobie.

Treasurer—Mrs. Carrie.

A large executive committee and a number of corresponding members were also nominated.

Mr. Trout's report was lengthy and yet concise. Four hundred and fifty children had been looked after in some way, and in almost all cases conditions had been improved. Thirty-seven children passed through the hands of the Society, one of whom was feeble-minded and six were boarders. The average stay in the Shelter for the other thirty wards of the Society was 44½ days.

Many very sad cases were dealt with individually and showed the many phases of the Society's work and more than justified the continued existence of the organization in the county.

Two hundred and twenty-nine wards of the Society are at present in foster homes, forty-seven are in homes classed as excellent, eighty-one in good homes, seventy are in fair homes, and thirty-one are in poor homes.

Mr. Kelso has been engaged for many years in this work and is in a better position to judge of results than any man in Canada and his work has earned for him the confidence and respect of everyone.

A hearty vote of thanks was tendered to Mr. Kelso at the expiration of this interesting address on motion of Messrs. Wm. Douglass and C. A. Fleming.

HALDIMAND COUNTY.

Following is a report of work during the past year by the Inspector for the eastern section of the County of Haldimand, Ont.:

No. of Families affected	12
" Children affected	30
" Children sent to school	6
" Children given work	4
" Children asked for	8
" Official warnings given	2
" Families supplied with food and clothing	3
" Office interviews	15
" Telephone interviews	12
" Police Court cases	1
" Letters received	33
" Letters written	36
" Miles travelled (approximate)	100
" Meetings addressed	4
" Hours devoted (approximate)	125

HASTINGS COUNTY, BELLEVILLE.

The Children's Aid Society held its annual meeting on Wednesday evening, November 1st, 1916, the President, Mr. A. E. Bailey, in the chair. Despite the inclemency of the weather there was a fairly large attendance of friends interested in children welfare. The President in his remarks stated that the year under review had been one of great trial and testing not only with the Society but with the world at large. Some of our best workers have been bereaved as a result of the world's conflict against oppression.

Through the public-spirited generosity of one of our foremost citizens one of the finest and best-equipped Shelters would soon be at the disposal of the committee.

Mr. Bailey in conclusion complimented the treasurer for his unselfish labours and also the committee whose onerous duty it was to look after the construction of the new building.

The Treasurer's Statement.

The Treasurer, Mayor H. F. Ketcheson, then read a summary of the annual statement. It showed in brief a total receipt of $4,624, and a balance on hand of $315. The following considerable donations had been received:—

Senator Corby	$100 00
H. W. Ackerman	10 00
Moira Lodge, No. 11, A.F. & A.M.	20 00
Belleville Lodge, No. 123, A.F. & A.M.	10 00
Estate of Helen C. H. Emberson	50 00
Margaret Robertson	5 00
Mr. and Mrs. R. J. Graham	10 00
Misses Hatt	15 15
Shannonville Epworth League	1 00
Miss A. I. Sutherland	7 50
Mrs. Geo. F. Stewart	5 00
Dr. and Mrs. Ackerill	5 00
A. E. Bailey	5 00

A handsome and well appointed new Shelter is being provided through the generosity of Mr. Thomas Ritchie, and will stand for all time as a monument of his love and care for the homeless and dependent little ones.

Inspector Ruston's Report.

The new inspector, Mr. Thomas D. Ruston, gave the following tabulated details of his work for the year ending October 3rd, 1916:—

Number of children in the Shelter at the close of last year	27
Number of children committed during the year	40
Number of children not wards cared for in the Shelter	17
Number of wards returned during the year	53
Making a total of children cared for in the Shelter	135
Complaints received	137
Investigations made	171
Police court attendance	47
Calls in the interest of children	614
Personal and phone interviews	965
Pieces of mail received	854
Pieces of mail sent out (including annual reports)	3,517
Wards visited in foster homes	138
Mileage covered (approximate)	2,917
Places outside the city visited	56
Wards in foster homes heard from	62
Number of applications for children received	129
Number of children placed out in foster homes	66
Number of children sent to Industrial School	5
Number of children died (wards)	0
Number of children involved during the year; those visited, dealt with and cared for	819
Number of wards in the Shelter at the close of the year	12

Mr. Ruston also told of some interesting experiences in the prosecution of his work.

The following officers were elected for the ensuing year:—

Hon. President—Thomas Ritchie.
President—A. E. Bailey.
Vice-President—C. R. McBride.
Secretary—M. W. Mott.
Treasurer—H. F. Ketcheson.
Auditors—E. P. Frederick, C. McLaurin.

KENORA.

The annual meeting of the Humane and Children's Aid Society was held on Tuesday afternoon in the council chambers. The reports of the President, the Secretary and the Treasurer were read and gave a resume of the work accomplished by the Society during the year. While the reports show that the amount of charity work done by the Society this year has been less than previous years, it is a condition of affairs that we are very pleased to record. However, this Society continues to accomplish a very humane work in looking after the poor and neglected when called upon to do so. and it cannot be too highly commended for the manner in which it is accomplished.

The officers elected for the ensuing year are:—

Hon. President—Mrs. R. J. N. Pither.
President—Rev. J. O. Lindquist.
First Vice-President—Mrs. S. S. Scovil.
Second Vice-President—Mrs. J. W. Humble.
Secretary—Mrs. J. P. Earngey.
Asst. Secretary—Mrs. George Mackenzie.
Treasurer—Mrs. J. A. Horan.
Asst. Treasurer—Rev. Canon Gibson.
Kenora, Ont., Oct. 1st, 1916.

Treasurer's Report, 1915-16.

Balance on hand, October, 1916	$188 48
Membership fees	26 00
Refunds from town	84 00
Township of Jaffray	22 20
Christmas donations	44 90
Refund on bills paid on account	9 00
Receipts of choral society concert	83 00
Grant from town	300 00
Interest and discount	7 16
Contra account for potatoes	20 00
	$784 74

Expenses.

Board and clothing for old lady	$62 00
Provisions for old lady	25 00
Wood for two families	4 50
Clothing and provisions for seventeen families	261 72
Stamps and printing	7 20
Expenses for Christmas cheer	1 10
Clothing for Galician boy and girl	34 47
Rent for family for seven months	42 00
	$437 99
Balance on hand	$346 75

KENT COUNTY, CHATHAM.

Reports presented at the annual meeting of the Children's Aid Society, held in the County Clerk's office, Harrison Hall, yesterday afternoon, show creditable work during the past year, and that the worthy objects for which the Society was organized are being carried out to the letter.

D. S. Patterson, the President of the Society, occupied the chair.

Following the reading of the minutes of the last annual meeting, which were adopted, Dr. R. V. Bray, secretary of the Society, read this report as follows:—

Chatham, Oct. 11th, 1916.

Mr. President, Ladies and Gentlemen:

I herewith submit my annual report as Secretary of the Children's Aid Society of the County of Kent for 1915-16. During the year the Board of Directors, ten in number, have held ten regular monthly meetings, at which the average attendance was seven. The President, Vice-President, Secretary and Treasurer were present at every meeting, and they have on this account been thoroughly in touch with all matters engaging the attention of the Board. Once or twice during the year, owing to members being out of the city, and our Board being so small, several matters of importance had to be held over for a time, and it struck me that we might reasonably increase the number of Board meetings to twelve or fifteen, and I would like this meeting to take advantage of Clause 26 in our Act of Incorporation and so elect twelve or fifteen instead of ten. No regular canvass of the city or county for membership was made during the year just closed, but your President and Secretary called on several gentlemen for donations of $10 each, at a time when we were in urgent need, and they were cordially received and the amount asked for was in every case cheerfully given. The City and County Councils gave us very acceptable grants, as did several of the townships and outlying towns. Financing the society, so as to always have a little balance on hand, requires care and work, and I hope the Board for 1916-17 will meet with financial success and undertake a canvass for members.

The executive officer has done good work during the year and the members of the Board have always given him assistance when re requested it. The President has given a great deal of time to the duties of his office and is deserving of the hearty thanks of this Society.

I bespeak success for the Board and Society during 1916-17.

Respectfully,

R. B. Bray, *Sec. C. A. Society.*

The following were elected as members of the Board: Mesdames W. A. Hadley, W. A. Sheldon, E. Taylor, S. Stephenson, W. T. Mead, Messrs. D. S. Patterson, Fred. Collins, Chas Austin, F. W. Biette, P. S. Coate, Sheriff Gemmill, and Dr. R. V. Bray.

Mr. Murray Reeve was appointed solicitor to the Board in place of S. B. Arnold, who is about to retire.

The meeting adjourned until Monday next, October 16th, at 4.15, for election of officers and other business.

LAMBTON COUNTY, SARNIA.

At the eighteenth annual meeting of this Society the reports of the Secretary and Treasurer were submitted and adopted, and the following officers elected for the ensuing year:—

President—Geo. A. Proctor.
First Vice-President—G. L. Phillips.

Second Vice-President—John Ferguson.
Secretary and Agent—John Wilkinson.
Treasurer—F. C. Watson.
Solicitor—R. V. Le Sueur.
Physician—Dr. Wm. Logie.
Auditors—George S. Samis, J. F. Elliott.

Moved by H. Conn, seconded by J. T. Patton, and carried.

Moved by G. S. Samis and seconded by J. F. Elliott, that the following be the Executive Committee:

Dr. A. McLean, G. S. Samis, H. Ingram, Major W. W. MacVicar, Robt. Kerr, F. C. Slater, Mrs. Geo. A. Proctor, Mrs. Wm. Ellis, Mrs. A. J. Johnston, Mrs. T. F. Towers, Mrs. H. Ingram, Mrs. G. S. Samis, Mrs. John Dyble, Miss M. C. Bucke, Miss J. Pousette, Miss Helen Barrie, the Mayor and the Warden of Lambton Co. Motion carried.

Summary.

Receipts.

Subscriptions	$84 00
Municipal grants	294 30
Government grant	480 00
Fraternal societies	26 00
Collection boxes	9 16
Reilley children	55 77
Pryor children	12 65
Interest on deposits	24 12
	$986 00
Balance from last year	1,136 18
	$2,122 18

Expenditures.

As above	$1,340 51
Balance on deposit	781 67
	$2,122 18
Janitor Methodist Church	$1 00
Secretary, balance salary	110 00
Secretary, salary for year	999 96
Christmas presents	10 00
Local Council of Women	2 00
T. H. Manley, supplies	1 75
"Observer"	10 50
Boots and shoes	11 65
Clothing	15 60
Care of children—	
Mrs. Griffin	64 88
Mrs. Winterton	45 00
Exchanges on cheques	68
Photos	3 00
Mackenzie Electric	1 60
Secretary's travelling expenses	62 89
Total expenditures	$1,340 51

F. C. Watson, *Treas.*

By reason of the several bequests left the Society the treasurer shows the balance of $781.67, but the fact that these bequests have been drawn on to the extent of some $350 for the past year's expenses, shows that the regular income has not been sufficient to meet running expenses.

LANARK COUNTY, SMITH'S FALLS.

The annual meeting of this Society was held in May, 1916. This statement is made to cover the period from March 1st to October 31st, 1916. In future annual meetings will be held in November, so that annual reports will cover a period equal with other societies in the Province.

President—J. J. Marsh.

Treasurer—J. J. Pearson.

Secretary and Inspector—Wm. Hyndman.

The Secretary reported as follows:—

Visits were made to fifty-two wards in Smith's Falls and Lanark County, and no changes were found necessary, as all seemed to be very well placed. Recently it was found necessary to quietly act regarding children out at nights and the result had been quite satisfactory. The Inspector has received nine special calls to attend Police Court in Smith's Falls, where children were being tried for more or less serious offences. Only in one case, that of a young girl who had proved incorrigible, was a severe sentence meted out, the others being dismissed or sentence suspended.

An important matter may in the near future require serious consideration, that of providing a Shelter. Through the kindness of the Renfrew officers, that home has been made the official Shelter for this county. It has been overtaxed for some time, and other arrangements may be found necessary on our part.

Following is a summary of the work for the period covered by this report:—

Applications for children	11
Children involved	48
Children made wards	13
Children sent to Industrial School	1
Complaints	23
Investigations	23
Mail received	132
Mail sent out	157
Meetings attended	7
Wards visited	52
Mileage covered (approximately)	734
Police Court attendance	9
Wards placed out	8
Warnings given	17

LEEDS AND GRENVILLE, BROCKVILLE.

The annual meeting of the Children's Aid Society of Brockville and the United Counties of Leeds and Grenville was held last night in Victoria Building. A larger group of citizens than usual were in attendance. Mr. D. W. Downey, president, was in the chair. Rev. L. E. Davis opened the meeting with prayer, following which the minutes of the last annual meeting were read, various reports presented, and officers for the ensuing year elected as follows:—

Hon. President—A. C. Hardy.
President—D. W. Downey.
Vice-President—R. J. Driver.
Secretary—I. C. McClean.
Treasurer—C. E. Baynes-Reed.
Hon. Solicitor—H. A. Stewart, K.C.
Hon. Physicians—Drs. Robertson, Purvis, Harding, McBroom, Williams.
Board of Management—Rev. Canon F. D. Woodcock, Rev. L. E. Davis, Rev. R. M. Hamilton, Messrs. W. H. Kyle, W. B. Reynolds, W. P. Dailey, Ed. Smart, C. Grant, W. T. Rogers.

Mrs. A. C. Hardy, president of the Women's Auxiliary and the convener of the House Committee of the Women's Auxiliary.

Votes of thanks and appreciation were extended to the retiring officers, His Honor Judge McDonald, H. A. Stewart, K.C., Hon. Solicitor, Hon. Physicians, the Press, and Police Department.

Mr. W. H. Wood, Agent of the Society, presented his report as follows:

The year 1916 started with nine children in the Shelter. During the year fifty-one boys and girls have been cared for. In this period twenty-five children were made legal wards of the Society and thirty-eight were placed in approved foster homes. Scores of investigations were made, and hundreds of interviews held concerning the welfare of children. Thousands of miles were covered in the third systematic visitation of wards of the Society.

This increase in the work of the Society has necessarily increased the office work and detail to a very considerable extent. Wards of the Society spent an enjoyable two weeks' vacation at the Brockville Boys' Camp.

The efficiency attained is due to the co-operative efforts of Mrs. A. C. Hardy, as President, with the officers and members of the Women's Auxiliary, Judge McDonald, H. A. Stewart, K.C., honorary solicitor, doctors, hospital officials, the Press, Chief Constable, and members of the Police Department, County and District officials, and the members of the Board of Management.

In closing, I wish to think all for their kind assistance.

Finances.

The Treasurer's report for the year 1916 was as follows:—

Receipts.

Balance from last year		$393 65

Amounts Recovered.

Counties, Leeds and Grenville	$1,346 15	
Counties, Stormont and Glengarry	232 21	
Town of Brockville	350 00	
Town of Prescott	20 00	
From parents	90 75	
		2,039 11
Donations		1,642 50
Interest		155 12

Payments.

Salaries:—		
Agent	$300 00	
Matron	300 00	
Asst.	168 00	
		$768 00
Maintenance:—		
Taxes	$19 18	
Repairs, etc.	49 86	
Telephone	25 25	
Coal (two years)	277 04	
Water	11 60	
Gas	42 84	
Light	25 10	
Laundry	92 96	
Drugs	26 89	
Groceries	291 65	
Meat	79 32	
Butter, milk, vegetables, etc.	223 64	
		1,165 33
		$1,933 33

Sundry Expenses.

Printing and advertising	$27 20	
Sub. Association C.A.S.	5 00	
Travelling expenses (children)	105 89	
Postage, telephone and office expenses	53 55	
		191 64
Balance		2,105 41
		$4,230 38

Respectfully submitted,

C. E. Baynes-Reed, *Treasurer.*

Examined and found correct,

A. W. Baxter, *Auditor.*

LENNOX AND ADDINGTON.

Hon. Presidents—T. G. Carscallen, M.P.P., Dr. T. W. Simpson.

President—Alpine Woods.

Recording Secretary—Mrs. F. L. Hooper.

Treasurer—Mrs. A. W. Grange.

Hon. Solicitor—T. B. German, Esq.

Council—Rev. J. H. Coleman, Mrs. F. F. Miller, Rev. A. J. Wilson, Alex. MacGregor, Mrs. M. Fuller, Mrs. C. Wartman, Mrs. W. Dunbar, Rev. C. E. Cragg, J. R. Smith, M. S. Madole, P. Gleeson, Mrs. Jas. Fitzpatrick, E. R. Checkley, Mrs. F. Cottle, James Gordon, Mrs. E. J. Corkhill, Rev. Chas. DeMille, Mrs. J. R. Dafoe, J. M. Root, Mrs. M. S. Madole, Mrs. R. S. Ham, Father O'Connor, Mrs. J. Walsh, Capt. Johnson, S.A., Capt. Thornton, S.A.

Agent—F. W. Barrett.

INSPECTOR'S REPORT.

To the President and Members of the Children's Aid Society of Lennox and Addington:

The following is a report of the work accomplished by this Society during the year ending December 31st, 1916:—

Applications for children	25
Children brought to Shelter, not wards	4
Placed on parole	5
Number of children dealt with	81
Children made wards, C.A.S.	6
Complaints received	33
Investigations	42
Number of pieces of mail received	104
Number of pieces of mail sent out	100
Miles travelled (approximate)	499
Office interviews	57
'Phone interviews	95
Places visited outside Napanee	29
Police Court attendances	14
Wards in foster homes, heard from	45
Wards placed out	7
Wards returned to Shelter	2
Wards visited	29
Warnings given	9
Sent to Industrial School	1

In reviewing the work of the Society for the past year, we can look back with a degree of satisfaction, in that some good has been accomplished, not as much perhaps as we would wish, but considering the difficulties under which the Society has to work, it has been the means of helping a number of children to obtain a better start in life.

HONORARY TREASURER'S STATEMENT OF RECEIPTS AND EXPENDITURES FOR YEAR ENDING DECEMBER 31ST, 1916.

Receipts.

Cash on hand	$50 32
Grant from County Council	100 00
Received from County Council in payment of accounts	225 11
Grant from Schermerhorn estate	200 00
Donation	2 00
Interest	1 80
	$579 23

Expenditure.

Balance of Agent's salary for 1915	$50 00
Children's board	195 17
Boots and clothing	42 57
Travelling expenses	29 00

Printing	7 62
Postage	28
Honorarium to Agent for 1916	100 00
Balance on hand	154 65
	$579 23

Certified correct.

JAMES REID, *Auditor.*

ANNABELLA GRANGE, *Hon. Treasurer.*

DURHAM AND NORTHUMBERLAND, PORT HOPE.

The Children's Aid Society of the United Counties of Northumberland and Durham held its annual meeting in the Counties Council Chamber in the town of Cobourg on the afternoon of Friday, November 10th, at 1.30 o'clock, with President J. W. Bickle in the chair.

Over forty representatives, ladies and gentlemen, from different parts of the counties, were in attendance, and much enthusiasm was shown over the splendid work done in the past year.

The Treasurer's report showed receipts from all sources, with a balance at the first of the year of $58.84, to be $3,025.08, and an expenditure, counting $500 put to building account for purchase of a Shelter, of $2,861.08, leaving a balance in the treasury with which to begin the year of $153.28.

Fitting recognition was made of the efforts of the Inspector in placing the institution on such a well organized and sound financial basis.

The following is a condensed report of the Inspector, to which it may be added that six town and township councils have made grants of various amounts since the beginning of November, bringing the number of the minor municipalities that have helped up to sixteen.

INSPECTOR'S REPORT FOR YEAR ENDING OCTOBER 31ST, 1916.

Number of children committed during the year	30
Number of children not wards cared for in Shelter	19
Number of wards returned	17
Number of wards replaced	15
Total number of children cared for in the Shelter during the year	62
Number of complaints received	81
Number of investigations made	93
Calls and interviews in the interests of children—approximate	1,000
Pieces of mail received—approximate	950
Pieces of mail sent out—approximate	1,375
Mileage covered—approximate	5,200
Wards visited in foster homes	97
Number of applications for children received	63
Number of congregations visited, presenting work	21
Number of village, town and township councils visited	19
Number of village, town and township councils making grants	11
Number of children placed in foster homes	37
Number of children returned to parents	20
Number of children sent to Industrial School	1
Number of children died (wards)	1

Number of delinquent boys personally dealt with	44
Total number of children involved, visited, dealt with, cared for	309
Number of children in Shelter at close of the year	10
Amount of money secured by Inspector (9 months) from individuals village, town and township councils	$1,375

The following splendid Board of officers and Council will control the Society for the coming year:—

OFFICERS.

Hon. President—J. H. Helm, Port Hope.
Hon. Vice-President—C. Rehder, Bowmanville.
President—J. W. Bickle, Cobourg.
First Vice-President—H. Fulford, Port Hope.
Second Vice-President—L. A. W. Tole, Bowmanville.
Treasurer—R. Gray, Port Hope.
Council—W. W. Porte, Brighton; B. C. H. Becker, Brighton; Dr. W. G. Robertson, Colborne; Dr. Hutchison, Grafton; Col. N. F. McNachtan, Cobourg; Rev. H. R. Horne, Cobourg; T. F. Harrison, Cobourg; Rev. F. J. Sawers, Cobourg; H. Hume, Port Hope; Rev. Jas. A. Elliott, Port Hope; Rev. W. F. Spidell, Port Hope.
Representatives from Counties' Council—Warden, Geo. Greer, Cobourg; Reeve, R. J. Doak, Millbrook; Reeve, D. F. Robertson, Campbellford; Reeve, A. A. Colwill, Newcastle; with the following ladies: Mrs. G. F. Clark, Brighton; Mrs. Geo. Greer, Cobourg; Mrs. (Dr.) Purdy, Cobourg; Mrs. (Dr.) Forrest, Port Hope; Mrs. F. Philip, Port Hope; Mrs. H. Hume, Port Hope; Mrs. A. W. George, Port Hope; Mrs. W. J. Helm, Port Hope; Mrs. L. A. W. Tole, Bowmanville; Mrs. C. Rehdelr, Bowmanville; Mrs. C. A. Chapman, Orono.

Five ladies from Port Hope are placed on the Board to form with the Treasurer, a Shelter Committee.

Meetings of the Board of Management will be held quarterly and at different centres in the Counties.

A strong executive committee, consisting of the officers, the five ladies of the Shelter Committee in Port Hope, and the following: Mrs. Purdy, T. F. Harrison, W. W. Porte and Revs. Messrs. Spidell and Elliott, will transact business arising between meetings of the Board.

NORFOLK COUNTY, SIMCOE.

HOLDS ANNUAL MEETING.

The Children's Aid Society of the County of Norfolk held its annual meeting on December 5th, 1916. While not largely attended it was enthusiastic. The Agent's report was read and adopted, and the treasurer's report showed a respectable balance on hand. The officers were unanimously re-elected as follows:

President—Frank Reid.
Vice-President—H. S. Macpherson.
Secretary—M. L. House.
Treasurer—Geo. Williamson.
Agent—D. E. McIntosh.
Executive Committee—The above-named officers and Messrs. R. Edmonds, Thos. Haddow, H. F. Cook, J. H. Butler and J. A. Campbell.

THE AGENT'S REPORT.

Simcoe, Dec. 5th, 1916.

Since our last annual meeting, Dec. 7th, 1915, we have had twenty-five children committed to our care who are now our wards, which, added to the number committed in previous years, totals 169 wards now under the supervision of the Children's Aid Society of Norfolk County. Besides this number there are a few who have been committed in other counties for which Norfolk is responsible for maintenance. There are eleven of our wards in khaki, who have gone to fight for our protection, eight at our Shelter, and one hundred and fifty in homes, three of whom have been released to their mothers. Consider for a moment if this work had never been done in this county or should cease to be done; can the loss be estimated? If not, the value of our work is incomputable.

The twenty-five children committed this year were taken from the following municipalities: Charlotteville, 7; Pt. Dover, 5; South Walsingham, 5; Townsend, 4; Windham, 2; Middleton, 1; Simcoe, 1.

During the year we have had fifty applications for children. We have received 35 complaints, made 35 investigations, received 300 letters, mailed 320, travelled 1,600 miles with horse and buggy, held 80 office interviews, attended police court 15 times, placed 22 children in homes, visited and inspected the condition of 142 wards in foster homes, and given 40 warning notices.

PEEL AND HALTON, BRAMPTON.

SECRETARY'S REPORT.

The annual meeting of Peel County Children's Aid Society was held in the Public Library on Thursday, October 26th.

At the close of another year we present to you our fifth annual report and another chapter has been added to the records of our Society.

We cannot report any substantial increase in our membership, but those already interested have accomplished much valuable work.

The chair was occupied by the President, Mr. C. D. Gordon.

The minutes of the previous meeting were read and approved, and the usual business transacted.

The Inspector, Mr. Norton, was then called on for his report.

Eight monthly meetings have been held.

The election of officers resulted as follows:

Honorary Presidents—R. Blain, M.P., Sheriff Henderson.

President—C. D. Gordon.

First Vice-President—David McClure.

Second Vice-President—Mrs. S. Deeves.

Record Secretary—Mrs. L. Cheyne.

Record Secretary—Mrs. L. Cheyne.

Treasurer—W. S. Morphy.

Auditors—Mrs. E. G. Graham and Mr. A. R. Hewetson.

Committee—Mesdames R. Blain, E. G. Graham, Duggan, Broddy, Silverthorne, Henderson, Crawford, Hewetson, Thornton, Gillies, Colbert, Duggan, Woods, Magill, Miss Stork and Miss Fingland; Messrs. Sheriff Henderson, Bate, Coombs, Mullett, Milner, Capt. Cooksey, Duggan, T. Wilson, Pringle, Fallis, Thauburn, together with the resident ministers.

Mr. Gordon paid a high tribute to the work accomplished by the faithful service rendered by the Inspector and of the influence for good that has been exerted on the young lives under his care and with whom he came in contact.

MRS. L. CHEYNE, *Secretary.*

INSPECTOR'S REPORT.

Following are some figures that will give a slight idea of the work for the year 1916:

Visits made to homes	115
Letters written	1,425
Children helped	209
Children made wards of the Society	12
Children cared for, not wards of the Society	4
Children sent to the Industrial School	2
Families helped financially and with clothing	10
Girls over 16 years assisted to a Christian, useful life	3
Boys over 16 years let off on suspended sentence, supplied with clothing, money and new surroundings to start life afresh	4

In closing I would like on behalf of the Society to thank the public press for notices given the work; Dr. Hall and Dr. Brydon for free treatment to wards; Sheriff Nathan Henderson for many trips to our wards by his motor car free; Mr. J. W. Hewetson for many pairs of boots for children free; the ladies of the Peel County Children's Aid Society for the many afternoons given making clothes for the children; to Crown Attorney W. S. Morphy, Chief Constable Andrew Herkes, and to all whom the Society is indebted to for kindness and services rendered to the little ones under our care, we are most grateful.

Respectfully submitted,

CHAS. W. NORTON, *Inspector.*

TREASURER'S STATEMENT, 1915-16.

Oct. 31	Balance brought forward from last year	$60 06
	Private subscriptions	91 25
	Proceeds school children's concert	42 30
	Collection at Weston meeting	3 40
	Public subscriptions	300 00
	Bank interest	4 05
		$501 51
	Disbursements	436 25
	Balance on hand	65 26

PARTICULARS OF DISBURSEMENTS.

Feb. 17	Chas. W. Norton, acct. Jan. 31st, 1915	$18 25
	Chas. W. Norton, salary to Jan. 31st, 1916	51 66
29	Deeves & Co. acct.	3 75
	Robinson & Stork acct.	11 65
	W. B. McCulloch acct.	5 50

May 3	Deeves & Co. acct	1 15
	Conservator acct.	20 25
	C. W. Norton, salary Apr. 30th, 1916	51 66
5	C. W. Norton acct. April 30th, 1916	24 19
Sept. 5	C. W. Norton, ¼ salary due July 30th, 1916	51 66
	C. W. Norton, acct. for quarter	26 04
	Robinson & Stork acct.	10 99
Oct. 27	Deposited to Shelter acct.	75 00
	C. W. Norton, acct. paid by him	32 84
	C. W. Norton, ¼ salary to Oct. 30th, 1916	51 66
		$436 25

Audited and found correct.

A. R. Hewetson.
Tilla Graham.

OXFORD COUNTY, WOODSTOCK.

The annual meeting of the Children's Aid Society was held in the basement of the public library last night and was largely attended. The principal business transacted was the election of officers and the reports of the president J. R. Shaw and the agent, Mrs. Pedley. All of last year's officers were re-elected by acclamation.

The report of the various committees showed that the society was in a flourishing condition. The finances were in exceptionally splendid condition and much credit for the success of the work of the society is due to the untiring efforts of Mrs. Pedley.

The report of the executive committee was read by B. Blair who in speaking of the work done said that Ingersoll had decided to join with the Woodstock branch. A committee had waited on the mayor and the members of the Ingersoll council and they had promised to join.

In the absence of J. G. McBeath the report of the house committee was read by J. R. Shaw. It showed that department to be in excellent condition. The finance report was presented by J. Y. Smiley. Rev. Geo. Tebbs, rector of St. James Church, Hamilton, gave a short address dealing with the work being done by the society.

Net Gain of $3,117.

The financial statement showed a very encouraging improvement in the society's affairs. A mortgage or $2,300 and interest amounting to $50 have been cleared off entirely by a magnificent gift of the whole amount of $2,350 from Miss Hannah Cross of Norwich. Improvements to property and additions to the furnishings have increased the valuation by $816.56, and an overdraft of over a thousand dollars on the maintenance account with which the year was commenced has been practically wiped out, the net total increase in the worth of the society being $3.117.31. The maintenance account still shows an overdraft of $586.90, but this is almost offset by an amount of $548.32, which is due on December 1st from the city and county maintenance.

At the beginning of the year 10 children were in the shelter, and the number has now increased to 14. Other interesting statistics given at the meeting were as follows: placements in 1916, 36; returns, bad placements, 3; applications for children (approximate) 100; sent to industrial schools. two boys, one girl; wards made by magistrate's order, 11; wards married, 2; kidnapped wards recovered, 2; weak minded, defective wards, 3; city wards, 66; county wards, 169.

J. R. Shaw said that at the present time 75 per cent. of the children cared for came from the county and he was under the impression that the county council should make a larger grant than it is now making. A committee from the society had waited

on a committee from the county council and requested that the grant be increased but the county council had taken no action in the matter. The society then started out on a campaign in the schools of the county to create interest in the work and secured the services of Miss Gilholm. The campaign was a success and as a result a large number of new members for the society had been secured from the pupils of the various schools Miss Gilholm had visited. The new members secured pay either a five or ten cent membership fee and were in return to receive a button of membership. The society hopes to create interest in the work by this method and expects it to bear fruit later on.

PERTH COUNTY, STRATFORD.

The Children's Aid Society took stock last night, elected an earnest band of officers, heard gratifying reports and later listened to an eloquent plea for interest in child welfare by Rev. J. M. Nicol, of Listowel. The zealous and sympathetic work of inspector Hugh Ferguson was warmly praised, and the members' faith in Sheriff Magwood and his deputies was shown in their re-election. These officers are:

Honorary Presidents—His Honour Judge Barron, the Mayor of the City of Stratford, and the Warden of the County of Perth.

Honorary Vice-President—Police Magistrate J. A. Makins.

President—Sheriff Magwood.

Vice-Presidents—Mr. J. H. Smith (Inspector of Public Schools) and the city clergymen.

Secretary and Inspector, Hugh Ferguson.

Recording Secretary, Mrs. J. Bottomley.

Treasurer—Mr. R. T. Mussen.

Honorary Solicitor—Mr. W. G. Owens.

Advisory Committee—Sheriff Magwood and Mr. W. G. Owens.

Finance Committee—Mr. Wm. Maynard (chairman), Sheriff Magwood, Messrs. George McLagan, W. P. Zick, Dr. H. B. Baker, C. McIlhargey, B. F. Kastner, Alex. Faill, J. A. Davison, F. A. Copus.

Humane Committee—Dr. J. W. Orr, V.S., (chairman), Rev. J. W. Hodgins, Messrs. Thos. Dunseith, W. J. Lannin, (Chief of Police), Mrs. A. C. McLeod, Mrs. Wm. Hepburn.

Shelter Committee—Mrs. Thos. Ballantyne (convener), Mrs. A. Gourlay, Mrs. Megan, Mrs. J. Bottomley, Mrs. R. H. Hollis, Mrs. H. J. Cotty, Mrs. George McLagan, Mrs. Pfeffer.

City Executive—The officers of the Society with the honorary solicitor.

County Executive—The City Executive with the President of each Branch Society in the County.

Auditors—Messrs. George Hamilton and James Dickson.

With Sheriff Magwood in the chair the business session of the Society opened at the Shelter at 7 o'clock.

The following gratifying report of the treasurer, Mr. R. T. Mussen, was submitted and certified correct by the auditors, Messrs. George Hamilton and James Dickson.

Receipts

Balance on hand	$487 50
Municipal grants	1,085 00
Branch Society grants	382 25
Maintenance of wards	588 28
Subscriptions	689 95
Interest on debenture	25 00
Total	$3,257 98

EXPENDITURES.

Inspector's salary	$799 99
Matron's salary	360 00
Matron's assistant	35 00
Matron's allowance	10 00
Inspector's travelling expenses	216 64
Taxes for 1916	41 57
Insurance on Shelter	19 80
Improvements, plumbing, repairs, etc.	324 66
Interest on purchase price of Shelter	24 00
Printing	33 28
Photographs	4 65
Clothing, boots and shoes and repairs	142 44
Drugs	10 75
Telephone	50 00
Association of Children's Aid Societies	5 00
War stamps and postage	4 30
Maintenance of Shelter	509 87
Balance on hand	665 93
Total	$3,257 98

The municipal grants were: Stratford $400, County Council $200, St. Mary's $75, Mitchell $50, Listowel $50, Wallace $35, Elma $30, Logan $30, South Easthope $30, Mornington $25, Fullarton $25, Downie $25, North Easthope $25, Blanshard $25, Hibbert $25, Milverton $20, Ellice $15, a total of $1,085.

The Branch Society grants were: Mitchell $50, St. Mary's $100, Listowel $75 plus a special grant of $100, Milverton $30.50, Atwood $20.25, West Monkton $6.50, a total of $382.25.

The maintenance of the Shelter, cost in all $509.87, expended as follows: Fuel $106.67, light $12.46, water $11.19, a total of $130,32; and for household supplies these sums—grocer $189.22, butcher $84.60, baker $60.32, milk $35.20, sundries $10.21, total $379.55.

The working balance on hand of $600 is a pleasing figure, yet not more than ample in view of the fact the winter is the time of heaviest expense and smallest collections; moreover the special grant from Listowel is a gift for a specific purpose and cannot be used for ordinary expenses.

Mayor Ferguson moved the adoption of the financial report, stating that he had never listened to a more economical report and that he thought the work was being conducted very cheaply.

The motion was seconded by Mr. D. G. Anderson, of St. Marys, and was unanimously adopted.

Following the election of officers Sheriff Magwood remarked jocularly that he supposed they could consider themselves elected by acclamation, and that he hoped the city Council would follow the same plan.

Resolutions were passed tendering the grateful thanks of the society to Treasurer R. T. Mussen, the recording secretary, Mrs. Bottomley, Inspector Hugh Ferguson and the matron, Mrs. Pugh. The good work of all was commented upon in warmest terms by the members present.

Inspector Ferguson's comprehensive report is given in complete form on page seven of *The Herald* to-day.

Deep regret was felt by the officers at losing Judge J. J. Coughlin, but satisfaction was expresed that Mr. W. G. Owens had agreed to take up the work as honorary solicitor.

Branch society delegates present were: Rev. J. M. Nicol, president of the Listowel society; Mr. D. Grant Anderson, president of the St. Marys branch, and President F. Hord and Secretary F. A. Moses, of Mitchell.

Care for Children.

Rev. J. M. Nicol, of Listowel, in commencing his address at the second half of the annual meeting said:

We have a splendid example of pure home life, where many a man's life is blighted, in the life of the Royal Family, the speaker said, and he laid special stress on the duty of parents to their children in providing proper home environment. Mr. Nicol cited cases of revolting cruelty that had been found in homes of intelligent, well educated people, and he declared that where Children's Aid Societies were established this was remedied. Mr. Nicol said that he was a believer in sin being hereditary, and he advocated early corrective training to counteract this and keep the lives of the children clean.

Urged Juvenile Court.

Touching on the subject of delinquents, Mr. Nicol said that it was only lately that the world was waking up to the fact that a boy was still a boy, even if he had committed a crime, and he should not be treated as a hardened criminal. In this connection, Mr. Nicol strongly urged the establishment of juvenile courts and expressed the hope that it would not be long before there would be one in Stratford. "It is the only way by which the youthful offenders can be reached and made to feel that the world is not against them, but that the judge is a friend, who wants to help them," he concluded.

May Have Court.

Sheriff Magwood, in tendering the thanks of the society, the resolutions being moved and seconded by Rev. Dr. Martin and Rev. Dr. Manning, said that the plan of establishing a juvenile court had been under consideration for some time, and that if some of the men of the city would come forward and take an interest in it there was a possibility of a juvenile court officer being appointed for Perth County in the near future.

The meeting was opened with prayer by Dr. Martin and closed with the benediction by Dr. Hughson. During the evening Miss Marie Clark sang very agreeably, accompanied by Miss Dot Hetherington.

Sheriff Magwood in his address prior to calling on Inspector Ferguson for his report, made special mention of the improvements made in the equipment of the shelter. Much of the work was done by the staff and a number of new fixtures have been secured.

PETERBOROUGH COUNTY, PETERBOROUGH.

The Annual Meeting of the Children's Aid Society was held on the evening of December 15th, 1916, the president, Mr. A. E. Peck in the chair, when the following report prepared by Mr. Jos. Wearing, was read by Mr. Spence in the unavoidable absence of Mr. Wearing:

Children's Aid Society of Peterborough City and County.—I have much pleasure in submitting my first report as Secretary of your society.

During the year important changes have taken place in the administration of the work, which will, it is confidently expected, be of material advantage to the Children's Aid Society, enlarging its scope and influence.

Mr. George Cochrane, who had for so many years been our able and energetic agent, found it necessary, owing to increasing age and infirmity, to relinquish his position, and Mr. C. A. G. Spence was unanimously appointed by the Executive to take his place, entering upon his duties, on June 1st, last.

The Receipts.

The recipts for the year ending Nov. 30th amounted to $3,482.02 while the expenditure reached $2,682.10, leaving a balance of $799.92.

It is most gratifying to note that in spite of the many calls on the purses of our citizens that the Tag Day receipts amounted to $1,303.84, an increase of $138.84 over last year. They started out with less than three dollars and wound up with a balance of about twenty dollars. Their total disbursements during the year amounted to about one hundred and eighty-five dollars.

Officers Elected.

The election of officers resulted in the re-election of the old Board.

"I don't think we can do any better than ask the present officers to remain," said Adjutant McElhiney. A number of new members were added to the Board of Management. Seven members will constitute a quorum, and the regular monthly meeting of the Society will be held on the second Tuesday of every month instead of the first Tuesday. The following officers constitute the Board for 1917:

Honorary President—The Mayor of the City.
President—Mr. E. A. Peck.
First Vice-President—Rev. Father Phalen.
Second Vice-President—Mrs. Birdsall.
Secretary-Solicitor—Mr. J. Wearing.
Treasurer—Mr. Horace Walkey.

Board of Management.

Warden of the County, President of the Ministerial Association, Fire Chief Howard, Chief of Police Thompson, Mr. E. L. Goodwill, Mr. G. Cochrane, Ald. J. Edgar, Mr. H. L. Beal, Mr. G. N. Gorden, Dr. Fortune, Dr. King. Adjt. McElhiney, Mr. G. W. Green, R. H. Parsons, Rev. Father McColl, Mr, Pennefather, Mr. H. McCannon, Mrs. J. W. Hopwood, Mrs. W. Stocker, Mrs. William Gibbs, Mrs. McElhiney, Mrs. W. A. Howard, Mrs. W. A. Sanderson, Mrs. W. H. Denham, Mrs. W. H. Meldrum and Mrs. Montgomery.

The Women's Auxiliary of the Children's Aid Association consist of the following ladies:

President—Mrs. William Gibbs.
First Vice-President—Mrs. Walter Stocker.
Second Vice-President—Mrs. T. C. Westlake.
Treasurer—Mrs. J. W. Hopwood.

Inspectors Report.

Mr. Spence's report contains the following:

To the President and members of the Children's Aid Society of the City and County of Peterborough:

Ladies and Gentlemen.—The following figures will convey some idea of the work that I have been able to do, covering the period from June 1st to November 30th, 1916, and in addition, it should be noted that much time has been occupied in revising records pertaining to the wards of the Society and other office work.

Statistics for 6 months ending Nov. 30th, 1916.

Applications for children	37	Mail sent out	493
Children brought to the Shelter (not wards)		Meetings addressed	8
		Mileage (approximate) covered	2,350
Children placed on parole (not wards)	5	Office interviews	78
		Places visited outside of city	67
Children returned to parents (not wards)	23	Police Court Attendance	30
		Wards placed out	17
Children involved	108	Wards returned to Shelter	5
Children made wards	9	Wards visited	100
Children sent to Industrial School.	2	Wards sent to Mercer Reformatory	1
Complaints received	46	Warnings given	37
Investigations made	58	Visits paid on behalf of children..	250

During the year Nov. 30th, 1915, to Nov. 30th, 1916, 56 children passed through the Shelter. 13 children were inmates of the Shelter on Nov. 30th, 1915, making a total of 69 having been cared for. Of this number 49 were males and 20 females; 41 came from the city and 28 from the county; 16 were made wards, 37 were returned to their parents, 20 were placed out. The total number of days' stay was 4,972, or an average of 72 days per child. There were 8 children in the Shelter on Nov. 30th, 1916, all of whom were boys, and four of them were being paid for wholly or in part privately.

Treasurer's Report.

The following report was submitted by Mr. H. Walkey, Treasurer of the Society:

Receipts.

Balance	$572 87
City grant	300 00
Gounty grant	300 00
Tag Day	1,303 84
Subscriptions, donations and collections	221 27
Board and Wages	727 17
Interest	56 87
Total	$3,482 02

Disbursements.

Board	$1,301 17
Salaries	534 92
Provisions, etc.	409 57
Ladies' Auxiliary	100 00
Tag Day expenses	62 86
Light, fuel, water and telephone	115 17
Interest	6 13
Postage	6 30
Expenses, travelling and sundry	68 06
Stationery and advertising	39 00
Sundry	38 92
Balance	799 92
Total	$3,482 02

PORT ARTHUR

The President,
Port Arthur Children's Aid Society, Port Arthur, Ont.

Dear Sir.—I have audited the accounts of the Society for the months during which you have been in operation and beg to report as follows:

Statement of Receipts and Expenditures.

Receipts.

Donations.	
Shuniah Lodge	$10 00
Ortho Bible Class	5 00
Daughters of Empire	65 00
Mrs. Hanwell	1 00
Women's Institute	25 00
Grant from City	2,400 00
	$2,506 00

Expenditures.

Rent—9 months at $25	$225 00
Wages	474 03
Amount paid in adjusting accounts with Ft. Wm. Children': Aid Society	282 93
Supplies and furnishings	800 97
Balance in Bank after allowing for cheques outstanding	723 07
	$2,506 00

On the face this would show a cost of $1,783.00 for operating during the nine months, but against this must be set the payment to the Fort William Branch of $282.00 which brings the cost down to $1,501 for nine months.

Included in the salaries is an amount of $66.68 to Mr. F. Blain which will not have to be met again in the future as the connection with the Fort William Society has ceased. In addition to these amounts, there are various items of expenditure on account of furnishings, and the expenses in this connection should be much lighter in future years, and thus leave more available for the ordinary expenditures.

The management is to be congratulated on their excellent showing during their first year of operation.

Respectfully submitted,

(Signed) T. F. Milne,
per F. B.
Auditor.

The officers are as follows:
President and Agent—Mr. Geo. Gibbon.
Secretary-Treasurer—Mr. A. G. Alexander.
First Vice-President—Mrs. H. Sellars.
Second Vice-President Mr. J. Hadden.
Finance Committee—Mr. Geo. Gibbon, Mr. A. G. Alexander, Mrs. H. Sellars, Mr. J. Hadden, Alderman R. Young, Mrs. J. Graham and Mrs. Flaherty.

Yours truly,

George Gibbon,
Agent.

RENFREW COUNTY.

Honorary President—His Lordship, Bishop Ryan, Pembroke.

Honorary Vice-Presidents—Hon. Geo. P. Graham, M.P., Hon. T. W. McGarry, M.L.A., Major Gerald White, M.P., E. A. Dunlop, M.L.A.

President—Rev. W. M. H. Quartermaine.

Secretary-Treasurer—E. J. Stewart.

Recording Secretary—Miss Sibary.

Shelter Committee—Rev. W. M. H. Quartermaine, Mrs. Sutcliffe.

President of Pembroke Committee—J. H. Reeves.

Children's Committee of Forester's Falls—Mrs. Grant, Mrs. McKaskill, Mrs. Williams, Mrs. Olmstead, Miss Cassie Curry.

Children's Committee of Beachburg—Rev. Mr. Haughton, Mrs. Headrick, Mrs. (Dr.) Alexander, Mrs. W. C. Little, Mrs. Condie.

Children's Committee of Castleford—Mrs. Humphries, Mrs. Neil, Mrs. Lindsay.

Children's Committee of Lakeview—Mrs. Moffatt, Mrs. Stitt, Mrs. Eckford, Mr. Dack, Mrs. Jas. Humphries.

SIMCOE COUNTY, BARRIE.

Inspector's Report to Annual Meeting

In presenting this, my first report, I wish first of all to thank the Society for the honor conferred on me in the appointment.

The work of the Children's Aid Society is the most interesting and important of any being carried on in the County of Simcoe. Interesting because children are interesting. Important because children are *important*. This Society aims at the moral and physical welfare of children, and the wonderful results obtained prove that it hits the mark so often that it ought to be given a larger place in the thoughts and plans of every one who has the best interest of this county at heart.

Two hundred and twelve visits were made to wards, and in doing so a distance of 2,200 miles was travelled. 172 letters were written to wards and others, and 84 were received.

Office interviews number 76. Cities, towns and villages visited number 131. Several hundred miles of distance travelled were done on a bicycle, because funds were not on hand to pay travelling expenses.

For any revival of interest in the work we are deeply indebted to the local press the proprietors having given most generously of their space.

All of which is respectfully submitted.

W. J. Justice,
Inspector.

Financial Statement.

From March 28th to November 1st. 1916.

Receipts.

Cash in Union Bank	$116 36
Co. Simcoe, re S. Lamothe	18 00
Co. Simcoe, maintenance	87 42
Co. Simcoe, maintenance	82 71
Co. Simcoe, maintenance	57 87
Co. Simcoe, re S. Lamothe	14 57
Co. Simcoe, maintenance	99 68

Donations	2 00
W. D. Norgate	15 00
W. D. Norgate	15 00
Co. Simcoe, maintenance	75 00
Co. Simcoe, maintenance	60 42
W. D. Norgate	15 00
Co. Simcoe, maintenance	74 57
Grant from Alliston	50 00
The Misses Gunn, Barrie	3 00
Mrs. Redditt, Blake St., Barrie	5 00
A nurse friend	8 00
Geo. Ottaway	1 00
Mrs. Wm. Aird	10 00
Stroud Women's Institute	10 00
Co. Simcoe, maintenance	133 80
	$954 40

Expenditure.

Maintenance and wages to date	$521 90
Fuel	58 50
Electric Light	7 59
Water	8 98
Gas	14 83
Livery	13 64
Photos	1 00
Repairs	12 07
Agent's Expenses	13 90
Caretaker	35 00
Drugs	2 05
Stamps and phone	2 25
Balance in Bank	257 59
Balance in Cash	4 92
	$954 22

STORMONT, DUNDAS AND GLENGARRY, CORNWALL

During the year ending September 30th, 1916, ten children have been made wards of the Society, of these six are in the Nazareth Orphanage, two have been taken over by a relative and the remaining two have been placed in foster homes.

The Counties are under no expense for the maintenance of these children.

Report of Treasurer for year ending September 30th, 1916.

Balance in hand from last year	$62 54	
Receipts for the year	259 65	
		$322 19
Disbursements		113 35
Balance in Hand		$208 84

OFFICERS ELECTED.

Honorary President—Dr. D. O. Alguire, M.P., Cornwall, Ont.
President—W. A. Craig, Cornwall, Ont.
First Vice-President—Irwin Hilliard, M.P.P., Morrisburg, Ont.
Second Vice-President—Hugh Munroe, M.P.P., Alexandria, Ont.
Secretary—F. D. McLennan, Cornwall.
Treasurer—H. B. Fetterly, Cornwall.
Honorary Solicitor—J. A. Chisholm, Cornwall.
Honorary Physician—C. J. Hamilton, M.D., Cornwall.
Auditors—J. R. Simpson and G. S. Kilgour, Cornwall.
Council—J. J. Calder, Lancaster, Ont.; E. M. Amell, Cornwall; A. I. Macdonell, Cornwall; E. O'Callaghan, Cornwall; J. W. McLeod, Mille Roches; Wm. Ogle, Mille Roches; C. H. Barber, Cornwall; Arthur Chevrier, Cornwall; R. G. Relyea, Cornwall; T. W. Ault, Cornwall.

HAILEYBURY, ONT.

OFFICERS OF THE CHILDREN'S AID SOCIETY OF TEMISKAMING.

President—H. S. Browning, Cobalt, Ont.
Vice-Presidents—The Clergymen of Temiskaming.
Secretary and Executive Officer—Robert LeHeup.
Treasurer, Geo. T. Smith.
Executive Committee—The Mayor or Reeve of each municipality and one Delegate appointed by each Mayor or Reeve, and three delegates from each Women's organization in Temiskaming.

FINANCIAL STATEMENT FOR THE YEAR ENDING NOV. 15TH, 1916.

Receipts.

Balance in Bank Nov. 2nd, 1915	$224 62
Societies and Clubs	364 00
Township of Coleman, Grant 1915	200 00
Township of Coleman, Special Grant	50 00
Town of Haileybury, Balance 1915 Grant	100 00
Town of Haileybury, Grant 1916	150 00
Town of New Liskeard, Grant	25 00
Proceeds Notes, Can. Bank of Commerce	400 00
Membership Fees	85 00
Collection Boxes	57 83
Donations	400 14
Maintenance of wards	337 06
	$2,393 65

Expenditure

R. LeHeup, Agent-Inspector, Salary	$720 00
Demand Notes, Canadian Bank of Commerce	400 00
Interest and Exchange	7 77
Travelling Expenses	12 60
Postage	25 30
Printing and Stationery	28 92

Telephone and Telegrams	1 85
Special Care of wards	37 14
Shelter, Running Expenses and Furnishing	1,147 73
Balance in Bank Nov. 15th, 1916	12 34
	$2,393 65

(Sgd.) Geo. T. Smith,
Treasurer.
Theo. H. Connor,
Auditor.

VICTORIA COUNTY, LINDSAY

The annual meeting of the Children's Aid Society was held in the Committee Room of the Shelter, commencing at eight o'clock.

The following gentlemen and ladies were present: Mayor Kylie, Alderman W. E. Baker, Mr. Rae, Mr. Clark, Mr. Naylor, Rev. Mr. Going, Mr. Sharpe, Miss Twamley, Miss Humative, Mrs. Milne, Mrs. Sisson, Mrs. Rea. Mrs. McKay, Mrs. Phillips, Miss Kitchener, Mrs. H. McDonald, Mrs. Marsh, Mrs. Henderson, Mrs. Gassien, Mrs. Sharpe.

The minutes of last annual meeting were read and confirmed.

Treasurer's Report.

The Treasurer, Mrs. Milne, presented her yearly report, which was received and adopted.

Receipts.

Jan. 1, Bank of Montreal	$15 83
Victoria Loan & Savings Company	26 49
Victoria Bal. purchase Home	30 58
Haliburton	13 30
Home for Aged	2,054 90
Victoria	900 00
Patriotic Fund	58 78
Patriotic Fund	23 43
Board in arrears 1915	23 50
Board for Children, 1916	359 46
Donation, R. Neill	5 00
	$3,511 27

Expenditures.

Matron	$200 00
Shelter Supplies	737 30
Miscellaneous expenses	16 09
Travelling expenses	51 40
Printing and advertising	20 94
Telephone and tolls	42 31
Secretary's salary	100 00
Clothing	32 18
Shoes	21 69

Property and grounds		233 23
Mortgages, Stewart & Scott		1,354 90
Bal. purchase of Home and legal expenses		670 58
Total Expenditures		$3,480 62
Dec. 31, Balance in Bank of Montreal		27 72
Balance in Treasurer's hands		2 93
		$3,511 27

MEMBERSHIP FEES ACCOUNT.

Jan. 1, 1916, balance at credit	$6 12	
Fees received	7 75	
Interest credited	38	
Dep. in Victoria Loan	$	$13 25
Cash on hand		1 00
		$14 25

Certified correct,
H. J. LYTLE, *Auditor.*

ELECTION OF OFFICERS.

The election of officers is as follows:
President—Mr. G. H. M. Baker.
First Vice-President—Mr. A. Clark.
Second Vice-President—Mr. Geo. E. Rea.
Third Vice-President—Mr. Jas. Gillogly.
Fourth Vice-President—Mrs. Whiteside.
Secretary—Mrs. Sharpe.
Treasurer—Mrs. Milne.

BOARD OF MANAGEMENT.

Following is the council of gentlemen and ladies, who, with the officers, constitute the Board of Management:

Mayor Kylie, Mr. Weeks, Principal Trask, Mr. R. Naylor, Mr. D. Sharpe, Mr. Geo. Coombs, Rev. Canon Marsh, Rev. Father Powers, Rev. Mr. Bryant, Rev. Mr. Going, Rev. S. J. McMullen, Rev. Mr. McIntosh, Captain of Salvation Army, Mr. W. E. Baker, Alderman W. M. Nichols, Mrs. Geo. Rea, Mrs. S. Henderson, Mrs. Sisson, Miss Twamley, Miss Weldon, Miss Thomas, Miss Hannahoe, Mrs. Carter, Mrs. Kitchener, Mrs. Gassien, Mrs. Marsh.

Auditor—Mr. H. J. Lytle.
Solicitors, Mr. L. R. Knight, Mr. J. E. Anderson.
Matron of the Shelter—Mrs. James Brown.
Agent—Mrs. E. E. Sharpe.

The following committees were also appointed for 1917:

Shelter Committee—Mrs. Whiteside, Mrs. Geo. E. Rea, Mrs. McKay, Mrs. V. Henderson.

Building Committee—Mr. Robert Naylor, Mr. Geo. E. Rea, Mr. D. Sharpe.

Sewing and Clothing Committee—Mrs. S. Henderson, Mrs. Twamley, Mrs. Sisson, Miss Weldon, Mrs. Gassien.

Temporary Home Committee—Mrs. Sharpe, Miss Thomas, Mrs. Geo. E. Rea, Mrs. McDonald, Miss Hannahoe, Mr. Robert Naylor, Mr. Jas. Gillogly, Mr. Geo. Coombs.

Foster Home Committee—Rev. Canon Marsh, Rev. Father Powers, Mr. J. Rogers, Mr. Geo. E. Rea, Mrs. J. McCullough, Mrs. R. M. Beal.

Visiting Committee—Mrs. Kitchener, Mrs. Gassien, Mrs. Wm. Porter, Mrs. R. Naylor, Mrs. Carter, Mrs. Cantors, Mrs. Spratt.

WATERLOO COUNTY.

Yesterday afternoon the annual meeting of the Children's Aid Society of the County of Waterloo was held in the City Hall, when representatives were in attendance from all parts of the county.

Among those present were Mesdames Cavers, Lash and Barrett, Miss M. G. Kay, Messrs. Barnes and Kerr and Mayor Edwards of Galt, Reeve Panabaker of Hespeler; Mr. Geo. Klinck of Elmira, and Mrs. J. Kaufman, Miss Snyder, Father Spetz, and Messrs. Strickland and Keffer of this city.

The election of officers for the ensuing year resulted as follows:

President—Rev. T. Spetz.

Vice-President—C. N. Pannabaker.

Secretary Treasurer—J. R. Strickland.

Inspector—C. R. Miller.

Stenographer—Elizabeth Higgins.

Auditors—W. D. Euler, M. Scully.

Branch Representatives—Galt—James Kerr, Mrs. T. Barrett, Mrs. M. G. Kay; City—Mrs. J. Kaufman, Miss M. Snyder; Waterloo—Mrs .Geo. Wegenast, Mrs. (Dr.) Bauman; Hespeler—Mr. E. S. Beer, Rev. Meyers; Preston—Mrs. John Wirsching, Rev. Gehl; Doon—Mrs. Homer Watson; Ayr—Mrs. J. Goldie, Dr. Ward Woolner; Wellesley—Mr. C. Ottman, Mrs. J. E. Reiner; New Hamburg—John Wing, Mrs. E. Merner.

Inspector Miller, who had done sterling work in his official capacity, was in attendance and submitted the following report which was adopted:

Including From November 1st, 1915 to October 31st, 1916.

Applications for children	163	Wards returned to shelter	39
Children brought to shelter (not wards)	7	Wards visited	258
Children placed on parole (not wards)	13	Deported	7
Children returned to parents (not wards)	7	Children in Detention	5
Children involved during year	357	Children in Hospital	9
Children made wards of C.A.S.	18	Children in foster homes in Waterloo County	247
Children sent to Industrial School	3	Boys enlisting for Overseas Service (approximately)	30
Complaints received	237	Wards married	3
Investigations	293	Adults taken to the House of Refuge	2
Mail received	842	Criminal cases aired in Court	3
Mail sent out	834	Children legally transferred to C.A.S. since 1907, and whose names appear on our files	802
Meetings addressed	12	Wards of Waterloo County	429
Mileage (approximately) covered	5,500	Industrial School Children	24
Office interviews	447	Wards sent in from other counties	322
Phone interviews	2,256	Industrial School Children (from outside)	27
Places visited outside the city	112		802
Police Court attendance	78		
Wards in foster homes heard from	105		
Wards placed out	51		

WELLINGTON COUNTY, GUELPH.

The twenty-third annual meeting of the Children's Aid Society was held in Carnegie Hall last evening. There was a small, but appreciative audience, and the greatest interest was exhibited in the work.

President Allan presided, and in his opening remarks referred to the passing of the new Temperance Act, and predicted that it will lessen the work of the society very materially. He deprecated military training in the schools, but urged that every child receive a thorough physical examination and training so that physical defects may be detected and overcome in childhood.

Rev. Amos Tovell, inspector for the city and county, presented his annual report, a record of hard work and encouraging success.

Mr. T. G. McMaster, treasurer, read his report, which showed a good financial standing. He referred in grateful terms to the generous backing the society had received during the year.

Rev. Geo. A. Little, of Chalmers' Church was the speaker of the evening, and gave a sympathetic and helpful address on child saving. He stated that his connection with children's aid work dated five years back, when he became agent for the Kenora Society, and he told of the encouragements and disappointments of the work in that western town. There were two things he did not need to speak of last evening, he said; one was, he did not have to plead the necessity of child saving. A Children's Aid Society, a children's shelter, and an agent in the city, all bespoke the fact that Guelph people are alive to the need and are behind the workers. He paid a well deserved tribute to the work of the inspector, Rev. Mr. Tovell, to whose untiring efforts and wise judgment so much of the success of the work is due. In concluding, he urged all children's aid societies to combine and press on the Government to give them control of delinquent girls and boys from sixteen to twenty years of age, so that for lesser crimes they will not come under the laws governing adult criminals.

Officers Elected.

The election of officers for the coming year resulted as follows:

Hon. President—Mrs. E. Chadwick.

President—Sheriff A. S. Allan.

First Vice-President—Mrs. Thomas Goldie.

Second Vice-President—Rev. C. H. Buckland.

Third Vice-President—Rev. Geo. A. Little.

Secretary—Miss J. C. Melvin.

Treasurer—Mr. T. G. McMaster.

Inspector—Rev. Amos Tovell.

Hon. Solicitor—W. E. Buckingham.

Auditor—Geo. Chapman.

Hon. Physicians—Dr. F. Walsh, Dr. W. O. Stewart, Dr. D. Foster (Dentist).

Veterinarians—Dr. Harvey, Dr. Reed, Dr. Grenside, Dr. Bracey.

Executive Committee—The Mayor, Mrs. Foster Mrs. W. Macdonald, Mrs. J. O. Rose, Mrs. H. Gummer, Mrs. A. Anderson, Mrs. J. C. Smith, Miss Robertson, Mrs. R. Harcourt, Mrs. Pentelow, Mrs. A. F. H. Jones, Mrs. McPherson, Mrs. A. Tovell, Mrs. Storey, Mrs. Duff, Mrs. Ouchterloney, Mrs. Merewether; Messrs. D. Young, W. H. Hamilton, Wm. Laidlaw, Major Merewether.

County Representatives—Arthur, Mrs. Brocklebank; Clifford, Mrs. J. R. Scott; Drayton, Mrs. Shorter; Elora, Rev. L. J. R. Naftel; Fergus, Rev. J. A. Moore, Mrs. G. C. Groves; Harriston, Rev. G. Poole, Mrs. J. J. Lavery; Mount Forest, Rev. W. Cooper, Miss Tasker; Palmerston, Rev. R. F. Nie, Rev. Geo. T. Watts.

Inspector's Annual Report.

Inspector Tovell presented his annual report, which was as follows:

The year 1915-16 has been filled with work of very great import. More children were involved during this year than in any previous year.

The following summary will indicate in part the work accomplished.

Children in the Shelter, Nov. 1st, 1915	18	Placed in Hospital	25
Children admitted during year	73	Returned to parents	21
		Ran away	1
Total	91	Industrial School	3
Each child counted once only	64	Died	1
Children from the City of Guelph	49	Orillia	2
Children from Co. of Wellington	37	In Shelter on Nov. 1, 1916	15
Children from other places	5		
Total	91	Total	91
		(One child died in hospital and two are now in hospital.)	
Girls	40	Applications for children	185
Boys	51	Children involved during the year	691
Total	91	Complaints received	205
Children made wards	24	Investigations	289
Children received as boarders	43	Mail received	948
Children placed in detention	6	Mail sent out	1,027
The following disposition was made:		Meetings addresed	55
Placed in foster homes	23	Mileage (approximate) covered	2,619
Placed in foster homes, not from Shelter	13	Office interviews	849
		Wards visited	159
		Warnings given	103

The work done by those in charge of the Shelter has also been very heavy this year. An unusual number of sick children added much to the ordinary work. Unfortunately the children contracted both measles and scarlet fever. There were but three cases of the latter, but every one who was not immune by an earlier experience had measles. This also affected our finances very seriously and it was necessary to send a number of patients to the hospital.

Treasurer's Report.

Mr. T. G. McMaster, Treasurer, presented his report of the finance of the year, which was as follows:

Disbursements.

Inspector's salary	$520 00
Inspector's expenses	122 73
Matron's Salary	304 00
Matron's help	456 85
Office rent	74 90
Light, gas, water, taxes and Insurance	148 59
Coal	373 25
Clothing	36 26
Food and Medicine	809 25
Repairs and furnishings	274 68

Postage and stationery		36 39
General Hospital account		289 00
Sundries		244 32
Interest on mortgage		180 00
Balance at Cr. of account, Nov. 23, 1916	$1,435 28	
Less O.S. cheques	9 80	
		1,425 48
		$5,294 70

Receipts.

Balance on hand, less cheques O.S. on date	$1,202 70
Young Ladies Auxiliary	1,539 99
City grant	900 00
County grant	900 00
Patriotic Society	168 48
Halton Co. (Maintenance)	94 21
Riverside Women's Institute	27 55
Drayton (1915) Institute	25 00
Drayton (1916) Institute	43 00
Morriston Women's Institute	3 50
Drew Women's Institute	2 00
Rothsey Women's Institute	5 00
Mt. Pleasant Lit Society	10 80
Elora Branch	74 70
Mosboro Church	5 00
Rockwood	7 00
S. S. No. 4	10 00
Received through Inspector	208 59
Sundry Parties	67 18
	$5,294 70

T. G. McMaster, *Treasurer.*

Audited and found correct,
(Sgd.) Geo. Chapman, *Auditor.*

The children of proper ages have attended the public schools and Sunday schools and some good reports have been made.

Much care is taken to secure for children in foster homes as good school privileges as are possible.

The importance of the regular habit of school attendance cannot be overestimated.

Parents cannot be too careful to know where boys and girls are every evening. There are many dangers for both.

With delight we hailed the advent of the new temperance legislation. One month after the law became effective, a mother who had five children, said she had for the first time in her married life, the sum of ten dollars in her home. This was a direct result of the new law.

We are pleased to report that sixteen boys who have been under the care of this Society have enlisted in various units for overseas service. Some of these were among the first to enlist. One of them is known to have made the supreme sacrifice.

The regular visiting of the children in foster homes in the county was attended by much pleasure and satisfaction. The children, with very few exceptions, were found to be healthy and happy in good homes.

The humane side of our work has also received the usual attention. Twenty-six cases arose during the year. Very few of these were of a grave nature. In one instance a man who had beaten his horse most unmercifully was brought before the magistrate, who imposed a fine. Three men were prosecuted for abusing a livery horse. In the majority of cases a word of advice or a warning has been sufficient.

To minister to one little child is of great importance. To relieve its pain or hunger; to rescue it from misery and shame; to protect it from abuse; to provide safety and comfort for it; to put it into a Christian home surrounded by Christian influences where it will receive loving care and education and a fair chance; these things count for much in the development of one child. Where these are multiplied many times and hundreds and thousands of cases are dealt with each year in our province by the Children's Aid Societies, the importance of the work is better understood.

There are many little ones waiting for care and comfort and the ministry of loving hearts must continue in this Christlike service until that day comes when there shall be no more pain or tears, or sin.

AMOS TOVELL, *Inspector.*

YORK COUNTY.

ANNUAL REPORT OF THE YORK COUNTY CHILDREN'S AID SOCIETY.

To the Warden and Members of the County Council of the County of York,

Gentlemen,—In presenting our fourth annual report of the Children's Aid Society, I beg leave to say that during the year ending January 31st, 1917, we have had (30) thirty children committed to the Society, only three of these are a charge upon the County. We have had occasion to send two boys to the Victoria Industrial School, at Mimico, two girls to the Alexandra Industrial School, Kingston Road, and I am sorry to say two girls have been sent to the Haven, on Seaton St., (both feeble-minded).

During the past year, I have visited and reported on 97 wards within the County and 137 in the City, and am pleased to say, that in the vast majority of cases, the foster homes are especially good and satisfactory, the children are being educated, and brought up to be good and useful citizens.

What the County of York requires for successfully carrying on the work, is a Shelter, and better office accommodation. We have occassionally to take immediate action in having children committed, and in such cases, we have to depend upon the City Shelters to take them in, until temporary, or permanent homes can be provided. There are at present ninety-one (91) boys and girls who are wards of the County of York, 60 of these have been committed since the County was organized, three years ago, October 1st, last.

Receipts

Grant from County	$2,000 00	
Care of Ward	100 00	
Bank Interest	6 21	$2,106 21
Balance from 1915		67 21
		$2,173 48

Disbursements.

Board		$261 90	
Clothing		62 17	
Office Furnishings		45 37	
Stationery		10 60	
Auto and Livery Hire		16 15	
Doctor		5 00	
Incidentals		10 12	
Inspector's Salary		1,015 00	
Treasurer's Expenses		25 00	$1,451 31
Balance in Bank	$822 67		
Cheques outstanding	104 90	717 77	
Treasurer's Cash		4 40	722 17
			$2,173 48

(Sgd.) W. D. Annis, *Treasurer.*

Twenty-fifth Report of Superintendent Neglected and Dependent Children of Ontario

To the Honourable Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to transmit herewith the twenty-fifth Annual Report of the Department of Neglected and Dependent Children of Ontario for the year ending December 31st, 1917.

Respectfully submitted.

WILLIAM DAVID McPHERSON,

Provincial Secretary.

Parliament Buildings,
Toronto, February 12th, 1918.

OFFICE OF THE

SUPERINTENDENT OF NEGLECTED AND DEPENDENT CHILDREN OF ONTARIO.

THE HONOURABLE W. D. MCPHERSON,

Provincial Secretary.

SIR,—I beg to submit herewith the twenty-fifth Annual Report of the work of this office, under the Children's Protection Act of Ontario, being for the year ending December 31st, 1917.

I have the honour to be,

Sir,

Your obedient servant,

J. J. KELSO.

153 University Ave.,
Toronto.

ONTARIO

NEGLECTED DEPENDENT CHILDREN

TWENTY-FIFTH REPORT

TORONTO, February 10th, 1918.

Steady progress was made during the year 1917 by the Children's Aid and other organizations dealing with neglected and dependent children. Notwithstanding the unusual conditions and extra burden created by the war the finances of the Societies did not suffer as anticipated, and it is a pleasure to note that the community spirit of service was more in evidence than ever before.

Sixty-five branch Societies, representing every City and County in the Province, were actively engaged in constructive social work of the highest order. These Societies had forty-seven Agents giving all their time to the work of home-saving and home-building, advising and encouraging parents as well as young people in law-abiding citizenship.

It is with much gratitude the writer records the fact that for a quarter of a century he has been permitted to serve the people of Ontario in this highest of all callings—the rescue, protection and care of destitute children and the popularizing of social service. Time has gone by all too quickly, crowded with opportunities and privileges, burdened with the weight of others' sorrow, but cheered also with abundant evidence of permanent good accomplished. The Children's Act was passed by the Ontario Legislature in April, 1893. In June last the event was commemorated by a gathering of workers in the Parliament Buildings.

From the passage of the Act to the present time the number of children made wards by legal order was 12,394, while several thousand others have been cared for indirectly through Shelters, Reform Schools, and at the request of parents and guardians. This is apart from that very large number whose happiness and welfare generally has been safe-guarded through firm but friendly intervention, without removal from their own home.

The number of children made wards for the year ending 31st December, 1917, was 1,035, of whom 866 were Protestant and 169 Roman Catholic. In this connection the following summary of commitments made in four years will be of value for comparison:

	Protestant.	R. C.	Total.
1914	728	176	904
1915	782	180	962
1916	763	131	894
1917	866	169	1,035

Of the total number of children, 831 were of legitimate birth and 204 illegitimate.

The sexes were fairly evenly divided: Males, 514; females, 521.

Re Illegitimate Children.

The number of illegitimate children made wards of Children's Aid Societies was 204, and of this number 173 were Protestant and 31 Roman Catholic. It is interesting to note that 59 young women attributed their downfall to soldiers, to whom their patriotism made them lenient.

Mothers of illegitimate children gave their nationality as follows:—English, 52; Scotch, 18; American, 5; Irish, 4; French, 4; Polish, 3; Russian, 1; Ruthenian, 1; Swede 2; French-Canadian, 2; Coloured, 1; Indian, 2.

In 68 cases the mother of an illegitimate child was a domestic, while in 15 cases the mother was a waitress. It might be noted that 19 of these mothers were subsequently married.

Naturally the larger number were dealt with in cities as follows:—Toronto, 88; Ottawa, 25; London, 20; Hamilton, 11.

Defective Children.

Mentally defective children (wards)	10
Physically defective	4
Retarded mentally, through neglect	25

Sex of Children—1917 Commitments.

Males	514	Females	521

Ages at Time of Commital.

1 year or under	190	9 years or under	57
2 years or under	75	10 " "	54
3 " "	53	11 " "	60
4 " "	63	12 " "	72
5 " "	62	13 " "	43
6 " "	57	14 " "	67
7 " "	51	15 " "	49
8 " "	60	16 " "	22
			1,035

How Dealt With.

Placed in foster homes	461	Enlisted	20
In Shelters while homes are being selected	202	In Shelters, Institutions or Colleges, maintenance paid by parents or relatives	19
On probation with parents	210	Died by accidents	3
Transferred to relatives	91	Died, infants, from neglect	11
In institutions with mothers	3		1,035
Placed in Alexandria Indus. School	3		
" Victoria Indus School	6		
" St. Mary's Indus. School	1		
Placed in Hospital	3		
" " (Consumptives)	7		

NATIONALITY OF PARENTS

——	Father	Mother	Both	Families	Children Involved
English	16	14	60	88	162
Scotch	3	3	4	10	21
Irish	5	5	9	20	39
Indian	.....	.....	4	4	12
Colored	.....	.....	2	2	2
French Canadian	.....	.....	20	20	45
American	8	6	6	19	29
Austrian	.....	.....	1	1	1
German	2	.....	1	3	5
Italian	3	3	.....	3	6

CHILDREN'S AID SOCIETIES

Following is a summarized report of the work carried on during the year 1917 by the various Societies:

ALGOMA DISTRICT—SAULT STE. MARIE.

The annual meeting of this Society was held on Monday, the 15th October, Mr. T. E. Simpson, M.P., President, in the chair. The various reports were found satisfactory, and the following were elected officers for the years 1917-18:—

President—T. E. Simpson.
First Vice-President—L. A. Hinsperger.
Second Vice-President—A. D. Sinclair.
Third Vice-President—Mrs. T. Fraser.
Secretary and Inspector—J. P. Reed.
Treasurer—R. G. Campbell.
Honorary Solicitor—W. G. Atkin.
Honorary Physician—A. A. Shepard.
Honorary Dentist—H. F. Goodfellow.
Members of Committee—N. Audett, E. H. Barnes, J. Bassingthwaighte, J. G. Blain, J. C. Braniff, W. A. Campbell, S. W. Fawcett, T. J. Foster, W. Grassi, J. Harrington, J. A. Hussey, F. A. King, H. Megginson, J. S. Nicholl, J. J. O'Connor, G. W. Rudlen, M. A. Sheridan, R. C. Vincent and E. S. Walker.

BRANT COUNTY—BRANTFORD.

At the regular annual meeting of the Children's Aid Society, held at Brantford, the following officers were elected:—
Honorary President—Mrs. Peter Wood.
President—Sheriff J. W. Westbrook.
Vice-Presidents—E. L. Gould and G. H. Williamson.
Honorary Solicitors—Harley & Sweet.
Treasurer—C. Cook.
Secretary—Miss S. Brown.
Agent—J. L. Axford.
The Treasurer reported as follows:

Receipts for thirteen months ending November, 1917	$2,938.37	Disbursements	$ 3,070.31
Deficit	131.94		
	$ 3,070.31		$ 3,070.31

The Agent, Mr. Axford, gave a very interesting report of his work during the year, and in the course of his remarks made some excellent suggestions for the more effective dealing with social evils.

BRUCE COUNTY—WALKERTON.

The following appointments were made at the annual meeting of the Children's Aid Society, held at Walkerton, for the year 1918:—

President—J. Morgan.

First Vice-President—Mrs. D. Robertson.

Second Vice-President—Rev. R. Perdue.

Treasurer—C. W. Burrows.

Secretary—Rev. D. McLennon.

A large house has been rented to be used as a shelter, and it is the intention of the County to provide a first class building before long to be used as a Shelter. Nine children were made wards, one sent to Industrial School and one to Orillia.

CARLETON COUNTY, OTTAWA.

The twenty-fourth annual meeting of the Ottawa Children's Aid Society was held in the Council Chamber, City Hall, on 11th October, 1917, the President of the Society, Mr. W. L. Scott, K.C., in the chair. The meeting had the honour of a visit from Her Excellency the Duchess of Devonshire, who, in England, was actively interested in National S. P. C. C.

The adoption of the several reports was moved by Sir Louis H. Davies, K.C., who expressed his pleasure at hearing such a magnificent report of the work of the year. During the course of his remarks, Sir Louis stated that the time had come when it was necessary to have a new detention home. The approximate cost of the home would be $20,000. The speakers referred to the 25th anniversary of the passage of the Children's Protection Law, and hoped before the next annual meeting was held they would be able to celebrate the formation of a Dominion-wide Children's Aid organization.

The following officers were elected for the year 1917-18:

President—W. L. Scott, K.C.

Vice-Presidents—Sir Louis H. Davies, Mr. John Gorman, Col. Irwin, Rev. Father Lapointe.

Honorary Treasurer—Col. Taylor.

Assistant Treasurer—J. M. Jackson.

Secretary—John Keane.

Visitor—John Raymond.

Probation Officers—Mme. Bruchesi, Miss Cassaday, Madame L. N. Rheaume, Mrs. C. H. Thorburn.

DUFFERIN COUNTY—ORANGEVILLE.

At a meeting to re-organize this branch was held on Monday, the 10th October, 1917, when the following officers were elected for the ensuing year:—

President—A. L. C. Struthers.

First Vice-President—Mayor Henderson.

Second Vice-President—Mrs. W. H. Bull.

Auditor—Elmer Still.

Honorary Physician—J. A. McLeod.

Hon. Solicitor—J. L. Island.

Secretary—Miss S. Hugson.

Treasurer—A. H. Skey, together with Rev. Father Finnegan, W. S. Wansbrough, T. S. Parkinson and T. E. Brown.

Inspector—H. F. Tuck.

ELGIN COUNTY—ST. THOMAS.

A representative gathering assembled at St. Thomas on Tuesday, October 23rd, to discuss the affairs of the local Children's Aid Society, the President, F. B. Holtby, in the chair. Before the routine work of the evening commenced, Mr. Kelso gave an address on child life and the necessity there is in every town for an active and efficient branch of the Children's Aid Society.

Mrs. Caughell, Secretary, gave an interesting account of the activities of the Society, and the Treasurer, Mr. Griffin, presented a statement of their financial position. The receipts were as follows:—

Board of children	$ 1,360.00
Municipal grants	400.00
Rummage sale	265.00
Tag day	659.00
Subscriptions	247.00
	$2,931.00

Officers Elected.

President—F. B. Holtby.
Vice-President—Dr. Chas. Marlott.
Second Vice-President—W. J. Shaw.
Third Vice-President—G. K. Crocker.
Fourth Vice-President—C. St. Clair.
Treasurer—F. M. Griffin.
Secretary—Mrs. E. H. Caughell.
Committee—The Mayor of the City, the Warden of the County, County Clerk McKay, Mrs. Cromwell, Geo. Stewart, Mayor Mann, Aylmer, A. McCallum.

FRONTENAC AND KINGSTON.

The annual meeting of this Society was held on 29th November, 1917, the President, Dr. A. W. Richardson, in the chair. The Agent, Mr. A. Jacks, presented a report of his work for the past nine months. During this time he made 829 calls in connection with children's welfare, and visited 125 wards of the Society, three children were sent to Industrial School, thirteen were temporarily taken from parents until home surroundings improved, thirty-five wards were placed out in foster homes, all doing well. At present there are no wards in any of the Orphanages.

The Treasurer's report was then submitted and found satisfactory, with a balance to credit of $340.90.

The following elections took place:—
President—Dr. A. W. Richardson.
Vice-President—James Halliday.
Secretary—Dr. W. W. Sands.
Treasurer—Oscar V. Bartels.
Honorary Solicitor—J. L. Whiting, K.C.
Executive Committee—Frederick Welch, S. R. Bailey, J. F. McEwan, W. H. Graham, J. W. Bradshaw, Capt. A. J. Smith, Dr. G. W. Bell, William Murray, the Warden of the County and the Mayor of Kingston.

ESSEX COUNTY.

The annual meeting for 1916 was held on 23rd February, 1917, when the following appointments were made:—

President—A. McNee.
First Vice-President—Gordon McGregor.
Second Vice-President—E. G. Henderson.
Treasurer—W. C. Kennedy.
Secretary—F. M. Allworth.
Inspector—W. F. H. Hackney.

The financial statement showed receipts amounting to $2,824.88 and the expenditure $2,466.02, leaving a balance on hand of $358.86.

FORT WILLIAM BRANCH.

President—A. Snelgrove.
Vice-President—Mrs. Layburn.
Treasurer—H. Murphy.
Hon. Solicitor—John A. Dyke.
Secretary—Frank Blain.

In addition to those elected above, the following appointments were made, all of which will constitute the Executive Committee:—

E. C. Smith, Mrs. John King, Mrs. T. Love, J. B. Hardy, Mrs. Garrity, C. E. Chappie, J. G. Macdonald, Mrs. W. H. Hicks, Miss Hannah, Mrs. N. Paterson, Mrs. J. A. Fife, C. W. Jarvis, M.P.P., and the clergymen resident in the city.

In 1915 the admission of children from Fort William to the Shelter numbered twelve, while in 1916 the total admitted was thirty, which goes to show the great necessity there is for a Shelter in connection with Children's Aid work. It is very pleasing to know of the increased interest which the general public are taking in the work, resulting in the number of homes which are open to receive children into their family circle.

There are 107 cases of neglect reported for the first time, involving 208 children, while 194 cases, involving 269 children, were dealt with as repeaters.

It is to be regretted that the number of children dealt with in 1916 shows an increase as against 1915. The number of juvenile delinquents appearing before the court also showed slight increase over previous year.

The receipts for the year 1916 amounted to $4,006.87, while the expenditure was $3,951.57.

GREY COUNTY—OWEN SOUND.

At the annual meeting of this Society the following appointments were made:—

Hon. President—R. R. Miller.
President—H. H. Burgess.
Vice-Presidents—Wardens of the County.
Secretary—Miss Annie Dobie.
Hon. Solicitor—A. D. Creasor.
Treasurer—J. G. Carrie.
Agent and Inspector—A. E. Trout.

During the year 123 applications for wards were received, 128 complaints investigated, during the year 56 children were housed in Shelter, and there are in Grey County 225 wards in good homes, doing well, and carefully looked after.

HALTON COUNTY AND MILTON.

President—J. M. Denyes.
Vice-President—Miss Ruddy.
Treasurer—C. H. Stuart.
Secretary—Miss C. Young.
Inspector—C. W. Norton.
Directorate—Resident Clergymen of Milton, Reeves of Municipalities, Dr. F. R. Watson, W. H. Stewart, D. E. Smith, Burlington; Mr. and Mrs. D. S. Robertson, Miss Graham, Mrs. McConnell, Mr. Marcelles, Mr. Campbell, Mr. Pearen.

Inspector's Report—125 visits made to homes, 224 children helped, 17 children made wards, 2 children to Industrial School, and assistance and advice given to several children and parents.

HALDIMAND COUNTY.

The annual meeting of this Society was held at Dunnville on 17th January, when the Secretary, Mr. C. R. Bilger, presented his report. The Society is very much handicapped for the want of a Shelter, and it is hoped that in the near future this want will be filled. The County Council made a grant of $500 to carry on the work of the Society this year.

The following were elected officers:—
Hon. President—R. A. Harrison.
President—Dr. H. Walker.
Treasurer—Geo. P. Brown.
Secretary—Chas. R. Bilger.

HASTINGS COUNTY—BELLEVILLE.

The annual meeting of the Belleville Children's Aid Society was held on Thursday evening, January 24th, 1918. The President, Mr. A. E. Bailey, in the chair, when the following officers were elected for the ensuing year:—

President—A. E. Bailey.
Vice-Presidents—E. R. McBride, Rev. A. M. Hulby, W. H. Ackerman.
Hon. Solicitor—W. Carnew.
Treasurer—H. F. Ketcheson.
Recording Secretary—M. W. Mott.
Inspector—T. D. Ruston.

The Treasurer presented a financial statement showing receipts $6,059.10, disbursements, $5,430.08.

The new Shelter has just been completed, and will be a great help in the work. The city and county are to be congratulated on having such a splendid home for neglected little ones, and the thanks of the whole community are due to Mr. Thomas Ritchie, who contributed the munificent amount of $15,000 towards the erection.

During the year 936 children came under the supervision of the Society in one way or another, 76 of whom were made wards of the Society. On the 24th January there were 42 children in residence in the Shelter.

HURON COUNTY AND GODERICH.

The annual meeting of this Society was held on Tuesday, November 15th, the President, Mr. James Mitchell, in the chair. The Treasurer, Sheriff Reynolds, presented his report, showing a balance to credit of $280, which was found satisfactory. The subject of a Children's Shelter was discussed, but nothing definite was done. All the outgoing officers were elected for ensuing year. Mr. George M. Elliott is the Agent for the county.

COUNTY OF KENT--CHATHAM.

At the annual meeting held at Chatham on the 3rd October, 1917, the following elections were made for the year 1917-18:—

President—P. S. Coate.

Vice-President—Mrs. W. D. Sheldon.

Secretary—Dr. R. V. Bray.

Treasurer—Sheriff Gemmill.

Committee of Management—F. Biette, N. McGuigan, Sheriff Gemmill, Mrs. Stephenson, Mrs. Meade, Mrs. Taylor, Mrs. W. A. Hadley, and Mrs. W. D. Sheldon.

Inspector—W. R. Baxter.

Good reports were presented by the Secretary and Treasurer.

KENORA.

The annual meeting of the Humane and Children's Aid Society was held at Kenora on Tuesday evening, the 6th November, 1917, when the following officers were elected for the ensuing year:—

Hon. President—Mrs. R. J. N. Pither.

President—Mrs. S. S. Scovill.

First Vice-President—Rev. Edwd. Diamond.

Second Vice-President—Mrs. J. W. Humble.

Secretary—Mrs. Lowry Johnson.

Asst. Secretary—Mrs. Geo. McKenzie.

Treasurer—Mrs. Hose.

Asst. Treasurer—Mrs. J. T. Brett.

Agent—Chief Gordon.

Probation Officer—Mrs. Eargney.

Receipts.		Payments.	
Balance in bank, October, 1916..	$346 75	Board for wards	$32 50
Membership fees	27 00	Wood	16 00
Christmas cheer	26 50	Ploughing	4 50
Town of Kenora	410 00	Stationery	15 03
Interest	8 82		

RENFREW.

In the County of Renfrew the work has been under the direction of Rev. W. H. M. Quartermaine, who has been unsparing in his efforts to advance the best interests of this work. The report of the year's work was not received in time to be included herewith.

LAMBTON COUNTY—SARNIA.

The annual meeting of this Society was held on Friday evening, the 9th November, 1917, the President, Geo. A. Proctor, in the chair. The Secretary and Agent, Mr. John Wilkinson, read his report, giving an outline of the Society's activities for the past twelve months. It was gratifying to find how year by year the interest in child welfare continues to increase, and that children taken under the care of the Society are well cared for in foster homes. During the year just closed six children were made wards, and 57 applications were received for children. There were 492 visits and investigations made in the interest of children.

The receipts amounted to $1,658.15, and the expenditure to $1,310.26, leaving a balance in bank of $347.89.

Officers of Society.

President—Geo. A. Proctor.
First Vice-President—G. L. Phillips.
Second Vice-President—John Ferguson.
Treasurer—F. C. Watson.
Physician—Dr. Wm. Logie.
Auditors—Geo. S. Samis and J. F. Elliott.
Solicitor—R. V. LeSueur.
Secretary and Agent—John Wilkinson.

LANARK COUNTY—SMITH'S FALLS.

The annual meeting of this Society was held on January 4th, 1918, when the following officers were elected for the ensuing year:—

President—J. J. Marsh.
First Vice-President—Rev. Thos. Kelly.
Second Vice-President—Rev. A. L. Fraser.
Third Vice-President—Mrs. P. Hallinan.
Treasurer—J. T. Pearson, Senr.
Secretary and Inspector—Wm. Hyndman.

The Society is anxious to secure a Shelter building so that children may be properly cared for.

LENNOX AND ADDINGTON.

The annual meeting of this Society was held in Napanee on 29th November, 1917. In the absence through illness of the President, Mr. Woods, the chair was occupied by Mrs. R. G. H. Travers, Vice-President. The following officers were elected for the ensuing year:—

Hon. President—Dr. T. W. Simpson.
President—Mr. Alpine Woods.
First Vice-President—Mrs. E. McGurn.
Second Vice-President—Mrs. R. G. H. Travers.
Recording Secretary—Mrs. F. L. Hooper.
Treasurer—Mrs. A. W. Grange.
Hon. Solicitor—Mr. German.
Inspector—Mr. F. W. Barrett.
Assistant Agent—Miss O. Hamby.

Mr. Barrett, Inspector, reported that in the past twelve months the Society had committed to its care eighteen children, sixteen of whom are placed in foster homes and two left under supervision of the Society. The total number of children on the Society's books as ward is forty-four. During the year the Society has been fortunate enough in having $10,000 invested for its use under the will of the late Mr. Reuben Schermerhorn, the interest on which is $500 a year.

LEEDS AND GRENVILLE—BROCKVILLE.

The annual meeting was held at Brockville on 24th January, 1918. The President, Mr. D. W. Downey, occupied the chair, and in the course of his remarks said that it was very satisfactory to see the increased interest which was being taken in Children's Aid work. Two friends of the Society made handsome provision in their wills for the benefit of the work. The late Mrs. Ridgeway left a thousand dollars, and the late Mr. Alfred Ireland his entire estate, subject to certain life interests.

Including the balance from last year of $2,105.41, the receipts were $4,699.42, and expenditures $2,846.77.

Owing to the former Agent, Mr. Woods, going overseas, the Society appointed Mr. Claude A. Winters to fill the vacancy.

The following officers were appointed for the ensuing year:—
Hon. President—A. C. Hardy.
President—R. J. Driver.
Vice-President—W. P. Dailey.
Secretary—I. C. McClean.
Treasurer—C. E. Baynes-Reed.
Hon. Solicitor—R. J. Driver.
Hon. Physicians—Robertson, Harding, Purvis, McBroom, and Williams.
Agent and Inspector—C. A. Winters.

LINCOLN COUNTY—ST. CATHARINES.

The annual meeting of the Children's Aid Society of St. Catharines and Lincoln County was held at the former place on November 28th, 1917, the President, Rev. Dr. Ratcliffe, in the chair. The Agent, Mr. Boyle, in his report, stated that 110 foster homes were visited, 27 children were admitted to the Shelter, and 4 were sent to Industrial School.

The following elections were made:—
President—C. H. Claus.
Vice-Presidents—The Mayor of the City, the Warden of the County.
Treasurer—Mrs. Rogers.
Secretary—Mrs. Clinch.
Solicitor—J. H. Ingersoll.
Auditors—Messrs. Poole and Madill.
Agent—R. E. Boyle.

The report of the Treasurer showed an expenditure of $2,346.84, leaving a balance to credit of $535.95.

A splendid new Shelter was opened in October, when the Hon. W. D. McPherson and Mr. Kelso attended and took part.

MIDDLESEX COUNTY—LONDON.

The annual meeting of this Society was held at London on 30th November, 1918, it being the twenty-fourth anniversary of the formation of this organization.

Mr. Sanders, Inspector, in his report, said that the Society had not only cared for dependent and neglected children, but also many children of men who have gone overseas. In several cases the mother had died, and the little ones had been brought to the Shelter. In other cases, owing to the absence of the father, the mothers have not been doing quite right with the children, and on the fathers being communicated with they have asked the Society to take the children and care for them until their return. To enable all this work to be accomplished the Shelter was enlarged, and through the generosity of the late Mrs. Shore they were able to do this, together with a further donation from Messrs. Purdon.

Several children have been placed in the Society's care by the Military Pensions Board, they having lost their parents.

Many children have been placed in excellent foster homes during the year.

During the year from the city of London 195 children passed under the care of the Society. Of these 71 were placed in foster homes and 75 returned to their parents when conditions at home had improved. The balance are in different institutions and the Shelter.

From the County of Middlesex 25 children were cared for during the year, 16 of whom were placed in foster homes, 1 returned to parents, 1 to Industrial School, and 7 remaining in Shelter.

The total income from all sources for the year was $13,887.49, of which office expenses absorbed $1,684.58, Shelter expenses $7,902.12, leaving a balance on hand of $4,185.79. Compared with other years receipts look large, but this is largely due to the Society having to draw from capital by the sale of fifty shares of stock. The balance of $4,185.79 is for re-investment.

The following officers were elected for the year:—

President—Sheriff Cameron.
First Vice-President—D. H. McDiarmid.
Second Vice-President—Mrs. F. E. Leonard.
Third Vice-President—Mrs. J. R. Regan.
Treasurer—John I. Hunt.
Secretary—Joseph Sanders.
Hon. Solicitors—McKillop and Murphy.

NORFOLK COUNTY—SIMCOE.

At the annual meeting of this Society held in Simcoe the following officers were elected for the ensuing year:—

President—Frank Reid.
First Vice-President—H. S. Macpherson.
Second Vice-President—J. A. Campbell.
Secretary—H. L. House.
Treasurer—Geo. Williamson.
Agent—D. E. McIntosh.

The total receipts for the year were $1,366.30 and expenditures $1,400, leaving a balance due the Treasurer of $33.70.

DURHAM AND NORTHUMBERLAND—PORT HOPE.

The Children's Aid Society held their annual meeting on the 8th November when a very satisfactory report was presented by the Agent, and showed a personal touch with 393 children. Sixty-eight children were cared for in the Shelter during the year.

A very healthy sign of the interest taken in the work of the Society in this part of the Province is the number of municipalities and townships who have given grants towards the expenses in connection with the work. In the Counties of Durham and Northumberland twenty-three public bodies have helped.

The Treasurer, Mr. Boulton, submitted his report as follows: The balance to credit is $431.36, compared to a balance of $215.90 as shown in last year's statement. Including this balance the total receipts were $3,774.83, and expenses $3,343.47.

It was decided to purchase the twelve-roomed house now in use as a Shelter, the County having given a liberal grant for this purpose.

Officers were elected as follows:—

President—J. W. Bickle.
First Vice-President—H. Fulford.
Second Vice-President—L. A. W. Tole.
Hon. Vice-President—C. Rehder.
Treasurer—H. R. Boulton.
Inspector—T. D. McCullough.

ONTARIO COUNTY—OSHAWA.

The annual meeting of this Society was held at Oshawa on 6th November and was largely attended. The President, Mr. Geo. W. McLaughlin, stated that year by year the Children's Aid Society was meeting with the general approval of the public, and it was astonishing the number of people that came to confer with him on the work of the Society.

The Treasurer's report showed receipts of $3,927.23 and expenditures of $3,706.23, leaving a balance to be carried forward of $221.

There was also a donation of $500 for a special purpose, and a special fund for renovation of $440 also spent. The report was adopted.

The Inspector reported that during the year he had travelled 3,408 miles in the interests of children. He had paid 130 visits to outlying districts looking after neglected children; the number involved for the twelve months were 151; made 121 investigations; attended 21 sessions of Police Court, and collected $736.52, which was handed to the Treasurer. Colonel Farewell and other speakers addressed the meeting on the great necessity of more active work amongst children, more especially the mental defectives for whose future training some special means must be adopted.

The officers elected were:—

President—Geo. W. McLaughlin.
Vice-President—F. L. Mason.
Second Vice-President—J. D. Storie.
Secretary—A. S. McLease.
Treasurer—H. Dent.
Hon. Solicitor—W. E. N. Sinclair.
Agent—E. C. Hall.

OXFORD COUNTY—WOODSTOCK.

The annual meeting of the above Society shows that 250 visits were made by the Agent in the interests of children and 39 children were committed to the care of the Society. There were 14 children resident in the Shelter at the beginning of the year and ten at close; 64 got temporary residence pending the placing in foster homes, and return to parents who promised reformation in their mode of living; 50 foster homes have been found for wards.

Officers of Society:—

Hon. President—Rev. Dr. McMullen.
President—J. R. Shaw.
Vice-President—B. Blair.
Auditors—Messrs. Sproat and McDunnough.
Medical Advisers—Drs. Stevens and Brodie.
Hon. Solicitor—R. N. Ball.
Bankers—Bank of Canada.
Agent and Inspector—Mrs. A. M. Pedley.

PRESCOTT AND RUSSELL.

An earnest effort has been made to get the Children's Aid Society better organized in the United Counties of Prescott and Russell. Rev. P. A. McEwan, of Ottawa, has acted as organizing secretary, and has done much valuable work. There is a good branch at Vankleek Hill, of which Mr. John Hartley is president.

PRINCE EDWARD COUNTY.

The Society holds regular meetings at Picton, and is ready at all times to take necessary action for the protection of children.

President—W. J. Carter.
Treasurer—A. E. Wilson.
Secretary—Mrs. Robert Davison.
Agent—George L. Hubbs.

PARRY SOUND, EAST—BURK'S FALLS.

At the urgent request of influential citizens Mr. Kelso visited Burk's Falls in July and assisted in the organization of a strong Society for the district of East Parry Sound, general social welfare to be included.

The annual meeting was held later at Burk's Falls, and at the request of the President, Rev. Canon Allman occupied the chair, when the following elections took place:—

Hon. President—Jos. Edgar, M.P.P.
President—Henry Knight.
First Vice-President—Dr. H L. Barber.
Second Vice-President—A. A. Agar.
Secretary—Miss E. West.
Treasurer—Fred Metcalfe.
Agent—John Hartill.

Mr. C. W. Norton attended and gave a lecture on child-saving, which was illustrated by lantern slides.

WEST PARRY SOUND—PARRY SOUND.

This Society is organized to cover the district of West Parry Sound, and notwithstanding many difficulties and hardships the territory has been well served by Mr. Joseph Ryder.

Following are the officers:—

President—R. A. Girdwood.

Vice-Presidents—Rev. R. A. Cowling, Rev. J. Binnie, Rev. T. G. McAteer Rev. W. T. Bunt, Capt. Johnston.

Recording Secretary—Willis Kenny.

Treasurer—W. H. Brown.

Agent—Joseph Ryder.

The sixth annual meeting was held in Parry Sound, the President of the Society, Mr. R. A. Girdwood, in the chair. Mr. Joseph Ryder, the Agent of the Society, read his report as follows:—

Complaints	40	Children involved	46
Applications for children	58	Children made wards	23
Conviction of serious offence	1	Mail received and sent out	770
Meetings attended	6	Mileage travelled	500
Places visited	26	Police Court attendance	40
Wards placed out	29	Wards placed from other Societies	15
Wards returned and released	9	Wards visited	165
Wards died	1	Warnings given	6
To Industrial Schools	5		

PEEL COUNTY—BRAMPTON.

This Society held their annual meeting in Brampton on 31st October, 1917. The President, Mr. C. D. Gordon, occupied the chair. The Agent, Mr. C. W. Norton, reported that 197 homes were visited, 297 children helped, 365 wards visited in foster homes, 7 children made wards, and 3 children sent to homes of correction. An urgent appeal for funds was made to carry on the good work.

PERTH COUNTY—STRATFORD.

Alderman D. M. Wright, in the absence of the President, Sheriff Magwood, presided at the annual meeting of this Society, which was held at Stratford on 27th November, 1917.

The Inspector, Mr. Hugh Ferguson, gave a general review of the work of the Children's Aid Society during the past year, and which included the placing of 40 children in foster homes, and 57 were cared for in the Shelter during the year. In the Juvenile Court the cases of 86 children and 6 adults were considered.

During the year 200 wards were visited in foster homes and their general surroundings found satisfactory.

Receipts.		Expenditure.	
Balance on hand last account ..	$665 93	Total disbursed	$2,881 11
County of Perth	1,037 90	Balance	582 42
City of Stratford	600 00		
Town of St. Mary's	250 00		
Village of Milverton	20 00		
Subscriptions	787 00		
Special subscriptions	77 65		
Interest of debenture	25 00		
	$3,463 53		$3,463 53

Officers of Society:—
President—Sheriff Magwood.
Vice-President—J. H. Smith.
Recording Secretary—Mrs. Bottomley.
Treasurer—R. T. Mussen.
Agent—Rev. Hugh Ferguson.

PORT ARTHUR DISTRICT.

The Society at Port Arthur includes the electoral district and is well organized for effective service. Mr. George Gibbon was elected both President and Agent, a tribute to his zeal in this great cause.

For some years past the district of Port Arthur was joined to Fort William, and worked by the Agent from that district, but owing to the increase of work, and the very large extent of territory to look after, it was, after careful consideration, decided to have separate Societies in each place under the direction of independent committees and officers. In order to give effect to this, an Order-in-Council was passed during the year giving Port Arthur jurisdiction over the Electoral District extending from Port Arthur to White River.

During the year 72 children were involved, 12 of whom were made wards, and 1 sent to Industrial School. At present there are 7 children in the Shelter.

The receipts during the year amounted to $2,361.70 and expenditure to $1,963, leaving a balance on hand of $398.70, after the year's operations, and when added to $723.07, balance to credit at audit of last accounts, gives the Society the sum of $1,963 with which to start to carry on its work this year.

The following officers were elected for ensuing year:—
President—George Gibbon.
Vice-Presidents—John Bowman and A. Mooney.
Secretary—
Treasurer—H. Murphy.
Agent—George Gibbon.

PETERBOROUGH.

Mr. E. A. Peck, President of the Society, occupied the chair at their annual meeting, when the different reports were read and adopted. In addition to the ordinary income, the Committee were fortunate in receiving two bequests, one of $500 from the estate of the late Mr. J. W. Bennett, and another of $3,868.61 from the estate of the late Mr. Robert Fife. These principal sums are invested and the interest goes to the expenses

in connection with the work and upkeep of the Shelter. In addition, the receipts for current expenditure, with interest, $98.37, reached the very satisfactory sum of $4,100.19, and disbursements amounted to $2,843.64, leaving a balance on hand of $1,256.55.

Hon. President—The Mayor.
President—E. A. Peck.
First Vice-President—Mrs. Birdsall.
Second Vice-President—Rev. Father Phelan.
Secretary—Joseph Wearing.
Treasurer—H. W. Walkey.
Hon. Physician—Dr. King.
Dentist—Dr. Middleton.
Agent—Geo. W. Powell.

STORMONT, DUNDAS AND GLENGARRY COUNTIES.

On October 17th, 1917, the annual meeting of Stormont, Dundas and Glengarry County Society was held at Cornwall, when the following officers were elected:—

Hon. President—John McMartin, M.P.
President—Wm. Pollock.
First Vice-President—W. A. Craig.
Second Vice-President—H. B. Fetterley.
Secretary—J. R. Simpson.
Treasurer—Arthur Chivrier.
Agent—J. W. Ault.
Hon. Solicitor—J. A. Chisholm.
Hon. Physician—Dr. C. J. Hamilton.
Auditors—G. S. Kilgour and A. D. Norris.
Additional members of the Board—J. J. Calder, Hugh Monroe, M.P.P., J. E. Tallon, James McLeod, H. Davie, C. G. Jamieson, A. I. McDonnell, F. D. McLennan.

The Society held twelve meetings during the year. Six children were made wards. Five boys sent to Industrial Schools. Cash received towards expenses, $212.84. Expended. $188.63. Balance on hand, $24.21.

SIMCOE COUNTY—BARRIE.

The report of the Inspector of the Children's Aid Society for Simcoe County gives some very interesting details of the work for the past year.

During the year 18 children were made wards, and 180 visits were made to wards placed in foster homes in the County, and a total of 4,180 miles were travelled in connection with the work.

The total receipts were $2,909.56 and expenditure $2,750.71, leaving a balance to credit of $148.85.

A sum of $579.08 is held in trust in the bank to the credit of the wards of the Society.

President—A. G. Sargeant.
Secretary-Treasurer—T. T. Young.
Inspector—W. J. Justice.

SIMCOE COUNTY—ORILLIA.

The annual meeting of this branch was held at Orillia on the afternoon of November 30th, Mr. H. T. Blackstone presiding, when the following report was submitted. The work of this branch is largely in co-operation with the County branch at Barrie, where the Shelter is situated, and the utmost cordiality exists. Local cases were carefully inquired into, and suitable action taken.

The accounts show a balance of $21.25 to credit.

President—Mr. H. T. Blackstone.
Vice-President—Mr. Geo. McKee.
Treasurer—Wm. Grant.
Secretary—W. McKanghan.
Executive Officer—Chief Reid.

SIMCOE COUNTY—COLLINGWOOD.

The meeting of this branch was held on 5th October, 1917, when Mr. C. C. Begg was elected president, Mrs. Arthur, Vice-President, Mr. Harvey, Second Vice-President, and Mr. Prentice, Secretary and Treasurer.

SUDBURY.

The tenth annual meeting of this Society was held on Monday, the 26th November, 1917, the President, Mrs. Frawley, in the chair. The Inspector reported that for the year under review 177 children were dealt with, of whom 13 were admitted to the Shelter as wards, 6 as boarders, and 4 on charity. Eighteen wards were placed in foster homes. The following officers were elected for the ensuing year:—

President—Mrs. Frawley.
First Vice-President—Mr. Ricard.
Second Vice-President—Mr. McCarten.
Secretary—Mrs. Wm. Kelly.
Treasurer—Mr. Patterson.
Inspector—Mr. Geo. Elliott, Sudbury.

TEMISKAMING DISTRICT.

The annual meeting of this Society was held at Haileybury, the President, Mr. H. S. Browning, in the chair. After referring to the loss which the Society sustained through the death of the late Colonel Hay, who was the first President of this Society, and at all times one of their most active supporters, the President stated that the help and encouragement received by the Society from all sources for the past year was most gratifying. The total receipts were $4,388.36, as compared with $2,393.65 last year. The Society has one of the best Shelter buildings in the Province and is making annual payments thereon. Mr. Leheup in his report said that 139 children were involved; 15 were made wards and 2 were sent to Industrial School; 15 wards were placed in approved homes; and 21 children were placed on parole.

President—D. L. Jemmett.
First Vice-President—A. N. Davis.
Second Vice-President—G. W. Slade.
Third Vice-President—N. J. McAulay.
Treasurer—G. T. Smith.
Secretary and Agent—R. Leheup.

WATERLOO COUNTY, GALT, AND KITCHENER.

On Tuesday evening the annual meeting in connection with above Societies was held at the splendid new Shelter and Detention Home, Hespeler, formerly known as "The Combac," which has recently been purchased for the joint use of the three Societies of Kitchener, Waterloo County, and Galt, when the following officers were elected:

President—D. W. Pannebaker.
First Vice-President—Rev. Theo Spetz.
Second Vice-President—S. J. McLane.
Secretary-Treasurer—J. R. Strickland.
Agent and Inspector—A. Pullan.
Auditors—Scully and Scully, Kitchener.

In the evening a large public meeting was held, when Mr. J. J. Kelso, Provincial Superintendent, addressed the gathering and formally opened the Shelter.

GALT, WATERLOO COUNTY.

This Society held its annual meeting on 11th October, 1917, when the Inspector read his report on the various phases of the work which came under his observation for the past year. Visits made, 110; juvenile cases in court, 40; neglected cases dealt with, 37.

The receipts for the year amounted to $154.39 and expenditure $275.78.

WELLINGTON COUNTY—GUELPH.

The annual report presented to the Society at their annual meeting, held in Guelph, by the Agent and Inspector, Rev. A. Tovell, made interesting reading, and the President of the Society, Sheriff Allen, expressed the pleasure he felt at hearing such a satisfactory and concise account of the work of the Society.

During the year 16 children were made wards and 51 children were admitted to the Shelter; during the year 546 cases were investigated in connection with child-welfare; wards in foster homes numbered 174; this necessitated travelling 3,255 miles.

The total receipts for the year were $5,495.28 and expenditure $3,880.04, leaving a balance to credit of $1,615.24, as against last year's balance of $1,425.48.

Officers of Society:—

Hon. President—Mrs. E. Chadwick.
President—Sheriff A. S. Allen.
Second Vice-President—Rev. C. H. Buckland.
Third Vice-President—Rev. Geo. A. Little.
Secretary—Mrs. J. C. Melvin.
Treasurer—T. G. McMaster.
Hon. Solicitor—Mr. Buckingham.
Auditor—Geo. Chapman.
Hon. Physicians—Drs. Walsh, Reed, Stewart, Foster, and Ruddell.
Agent and Inspector—Rev. Amos Tovell.

HAMILTON.

The twenty-third annual meeting of the Children's Aid Society was held on 15th October, 1917, in the Children's Shelter, when the various reports of the activities of the Society were read and adopted. The following were elected officers for the years 1917-18:—

Hon. President—Mr. Adam Brown.

President—Mr. W. H. Wardrope, K.C.

Vice-Presidents—Mr. W. A. Robinson, Mr. H. L. Frost, Mr. W. H. Lovering, Sheriff Middleton.

Recording Secretary—Mrs. Urquhart.

Financial Secretary—Miss Ida Malcomson.

Treasurer—Mrs. C. A. Hunter.

Inspector—Mr. J. C. Pinch.

Executive Committee—Sir John Gibson, Messrs. Adam Brown, W. H. Wardrope, W. A. Robinson, H. L. Frost, Sheriff Middleton, W. H. Lovering, J. C. Pinch, J. J. Greene, G. H. Milne, Rev. Dr. Mahony, George S. Kerr, Lady Gibson, Mesdames Evans, Lucas, Kilgour, Barker, Urquhart, Duffield, Henderson, William Hendrie, W. H. Bruce, F. S. Malloch, D. B. Pratt, Robert Hobson, W. G. Smart, W. A. Robinson, G. S. Kerr, William Walker, H. Sloan, W. H. Lovering, Wallace, George J. Guy, and Miss Malcomson.

The Treasurer showed receipts $2,877.09 and expenditure $2,484.79, leaving a balance to credit of $392.20.

During the year the sum of $1,000 was received from the estate of W. R. Birely.

TORONTO.

The 26th annual meeting of the Society was held at 229 Simcoe St. on the afternoon of November 28th, when Mr. J. K. McDonald presided, assisted by Mr. J. O. McCarthy. The report read to the meeting showed that during the year 1,191 complaints were received, involving the interests of 2,641 children; 438 children were received into the Shelter; and during the nine months for which the detention home was open 730 boys were brought there by the police or sent from the Juvenile Court.

The receipts of the Society for the past twelve months were $10,678.11, and outgoings $16,881.69, showing an expenditure over receipts of $6,203.58, which had to be met out of a special account which had accumulated in former years. This expenditure is largely due to the fitting up and furnishing of the detention home, which will not again appear in the accounts.

VICTORIA COUNTY, AND LINDSAY.

The Secretary reports for 1916 eleven regular meetings held and three executive meetings. During the year twelve children were made wards of the Society. Thirteen have been cared for in the Shelter, maintenance being paid for by parents. During the year thirty children and three adults have had temporary residence in the Shelter.

The Treasurer, Mrs. Milne, presented her report, which showed that the total receipts for the year amounted to $3,511.

The following officers were elected:—

President—G. H. M. Baker.

First Vice-President—A. Clark.

Second Vice-President—Geo. E. Rea.

Third Vice-President—Jas. Gilloghy.

Fourth Vice-President—Mrs. Whiteside.

Secretary—Mrs. Sharpe.
Treasurer—Mrs. Milne.
Solicitors—L. K. Knight and J. E. Anderson.
Matron of Shelter—Mrs. Brown.
Auditor—H. J. Lytle.
Agent—Mrs. Sharpe.

YORK COUNTY.

The report of the Children's Aid Society, presented by the Agent, Mr. R. P. Coulson, to the York County Council, at their meeting, is as follows:—

During the year 300 children came under the care of the Society. Of these 23 were made wards. Two were sent to Industrial Schools Altogether there are 110 wards of the Society. Mr. Coulson pointed out the great need there is for a Shelter in connection with the County work, and also strongly urges the necessity for more care to be exercised in the issuing of marriage licenses, so that marriages of those physically unfit or otherwise defective could be avoided. Magistrate Brunton expressed himself fully in accord with Mr. Coulson's recommendations and instanced several cases which came before him in connection with the marriage of feeble-minded persons.

The financial statement of the Society showed a balance to credit of $500, and a grant of $1,500 was asked from the Council to carry on the work.

President—George S. Henry, M.P.P.
Treasurer—W. D. Annis.
Agent—R. P. Coulson.

INDEX.

TWENTY-FOURTH REPORT.

PAGE

Children made wards 7
Where children came from 8
Parental records 8
Supervision 9
List of County Agents 10

Reports of Children's Aid Societies:
Algoma 11
Brant County 12
Bruce 13
Carleton 13
Durham and Northumberland.... 31
Elgin County 16
Essex 18
Fort William 19
Grey County 20
Haldimand 21
Haileybury 43
Hastings County 21
Kenora 23
Kent County 24
Lambton 24
Lanark 26
Leeds and Grenville 26
Lennox and Addington 28
Norfolk County 31
Oxford 35
Peel and Halton Counties 32
Perth County 35
Peterborough 37
Port Arthur 40
Renfrew County 41
Simcoe County 41
Stormont, Dundas and Glengarry. 42
Victoria County 44
Waterloo 46
Wellington 47
York 50

TWENTY-FIFTH REPORT.

PAGE

Children made wards 59
Illegitimate children 60
Nationality 61

Reports of Children's Aid Societies:
Algoma 62
Bruce County 63
Carleton 63
Durham 70
Dufferin 63
Elgin 64
Frontenac 64
Essex 65
Fort William 65
Grey County 65
Hamilton 78
Halton County 66
Haldimand 66
Hastings 66
Huron 67
Kent 67
Kenora 67
Renfrew County 68
Lambton 68
Lanark 68
Lennox and Addington 68
Leeds and Grenville 69
Lincoln County 69
Middlesex 70
Norfolk 70
Ontario 71
Oxford 71
Prescott and Russell 72
Prince Edward County 72
Parry Sound, E. 72
Parry Sound, W. 73
Peel County 73
Perth County 73
Port Arthur 74
Peterborough 74
Stormont, Dundas and Glengarry. 75
Simcoe County:
Barrie 75
Orillia 75
Collingwood 75
Sudbury 76
Temiskaming 76
Toronto 78
Waterloo County 77
Wellington 77
Victoria 78
York County 79

REPORT

OF THE

Board of License Commissioners for Ontario

ON THE OPERATION OF THE

ONTARIO TEMPERANCE ACT

FOR THE YEAR

1917

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO.

TORONTO:
Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

To His Honour SIR JOHN STRATHEARN HENDRIE, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your honour the Report of the Board of License Commissioners for Ontario on the Operation of *The Ontario Temperance Act* for 1917.

Respectfully submitted.

WM. DAVID McPHERSON.

Secretary.

Provincial Secretary's Department.
February 5th, 1918.

REPORT

OF THE

BOARD OF LICENSE COMMISSIONERS FOR ONTARIO

ON THE OPERATION OF THE

ONTARIO TEMPERANCE ACT

FOR THE FIRST YEAR DURING WHICH IT HAS BEEN IN FORCE

1916-17

PARLIAMENT BUILDINGS, FEBRUARY 5TH, 1918.

TO THE HONOURABLE W. D. MCPHERSON,

Provincial Secretary of the Province of Ontario.

SIR,—The Board of License Commissioners for Ontario has the honour to submit its Second Annual Report covering the operation of *The Ontario Temperance Act* for the first full year and a fraction more, from September 16th, 1916, to October 31st, 1917.

The Board's last Report contained little information relative to the operation of *The Ontario Temperance Act*, as it dealt with a period during which *The Liquor License Act* was in force for a large portion of the time.

In preparing this Report the Board considered it would be of public interest that the result of the first full year under *The Ontario Temperance Act* should be given, rather than confining the Report to the ordinary License Year which ends on the 30th April of each year.

Under the circumstances this Report is a considerable departure from previous Reports, as it brings the statistics up to a recent date, and hence will, it is hoped, repay the trouble involved in a careful examination of the Schedules which accompany the Report.

THE SCHEDULES.

Schedule "A" is a partial report showing number of convictions and dismissals of cases for infraction of *The Liquor License Act* between May 1st, 1916, and September 15th, 1916, or up to the eve of *The Ontario Temperance Act* coming into operation.

Schedule "B" affords similar information with reference to Local Option territory between the same dates as in Schedule "A."

Schedule "B" (*a*) gives similar information from *Canada Temperance Act* territory.

Schedule "C" shows the number of convictions and dismissals under *The Ontario Temperance Act* from September 16th, 1916, to September 30th, 1917, being about twelve and one-half months. The number of convictions of Standard Hotel licensees under this heading were 80, and 28 dismissals, against 3,135 convictions of non-licensees and 594 dismissals. This indicates that the chief source of offence against the new law is not from Standard Hotel licensees. It should be explained that in the greater totals just given were included 2,011 convictions and 183 dismissals under charges of intoxication in a public place.

Schedule "C" (*a*) makes a similar return of convictions and dismissals in *Canada Temperance Act* territory from September 16th, 1916, to September 30th, 1917, showing 101 convictions and 17 dismissals.

Schedule "D" is a very interesting feature and shows the revenue accruing to the Province under *The Ontario Temperance Act* from fines imposed thereunder by license districts, the total revenue from this source being $184,702.49. When to this are added fees for Standard Hotel licenses, sale of confiscated liquor, etc., the total revenue paid to the Provincial Treasurer by this Branch of the Department for the fiscal year ended October 31st, 1917, was found to be $192,531.84. Against this, the expenses of law enforcement, including salaries of Provincial and Local Inspectors, law costs, and salaries and disbursements of members of the Board and the office staff, amounted to $189,963.48, thus showing that *The Ontario Temperance Act* has been administered without cost to the Province; indeed, yielding a small surplus.

Schedule "E" shows the expenses of enforcing *The Ontario Temperance Act* by districts up to October 31st, 1917.

Schedule "F" is supplementary to Schedule "D," showing the items which, added to fines, go to make up the total revenue from this Branch for the year ended October 31st, 1917, of $192,531.84.

Municipalities and The Ontario Temperance Act.

Schedule "G" is another interesting feature of the Report, showing the revenues accruing to municipalities which have appointed officers under Section 120 of *The Ontario Temperance Act*. These municipalities have received revenues in fines up to October 31st, 1917, amounting to the large sum of $305,466.76, thus making a grand total of revenues from fines received by the Province and municipalities of practically half a million dollars, or to be exact, $497,998.60. Study of this schedule will reveal variation in the degree of activity shown by the Local Police in *Ontario Temperance Act* enforcement, which is suggestive. It would be unwise to assume that the small returns in fines in some municipalities are necessarily indicative of either scrupulous law observance or of rigid police enforcement. Heads of municipalities, and Police Chiefs throughout the Province, and especially heads of municipalities which have not availed themselves of the powers conferred by Section 120, will find study of Schedule "G" worth while.

Schedule "H" shows the number of commitments to jail for drunkenness from 1885 up to the present. Notwithstanding that drunkenness constitutes a more serious offence under *The Ontario Temperance Act* than under former legislation, and that Municipal Police have joined with License Inspectors to repress public intoxication, the total shows a gratifying reduction as compared with the total of recent years, as will be seen by consulting the schedule, indicating that greater sobriety is an undoubted fruit of *The Ontario Temperance Act*.

Standard Hotels.

The number of Standard Hotels in existence at the close of *The Ontario Temperance Act* year, namely, October 31st, 1917, stood at about 1,300. The number of such licenses varied slightly throughout the year, with a tendency to increase. At the time of meeting of the Legislature in 1918, the number of outstanding Standard Hotel licenses is estimated at 1,326.

On the whole the public is receiving satisfactory service from Standard Hotels; the average tendency has been toward improvement rather than deterioration. This is gratifying in view of war-time difficulties which have peculiarly assailed the business of hotel-keeping through increasing expenses of operation, rendering securing of help difficult, and diminishing the volume of travel.

It is obvious that the hotel business was destined to undergo severe trial in any case, in view of unsettling war-time conditions, irrespective of the inauguration of *The Ontario Temperance Act*. It is reassuring that the disturbance has been no greater than it has, and that so large a proportion of hotel-keepers are proving desirous of showing their adaptability for making a success of the hotel enterprise under the altered conditions now prevailing.

Direct Demands Upon the Board.

The Ontario Temperance Act has wrought much change in the work of the Commission in consequence of various duties that have been added. Chief among the Board's duties is law enforcement, which has grown in importance with the increase of restriction under the Act. Ontario is the first Province to place this and kindred matters in the hands of a Central Board; and it is possibly not too much to say that favourable comments with respect to conditions in Ontario as compared with those in Prohibition States of the American Union are largely due to this policy. One result is a nearer approximation to uniform enforcement over the Province than was possible under the old system—an approximation that should become greater as municipalities learn the results upon their communities, including their revenues, from co-operation in enforcement under the provisions of Section 120. But apart from that, the intimate touch between Inspectors and the Board and their knowledge of the Board's support, has greatly aided enforcement.

Whether enforcement will be rendered much easier by the new restrictions imposed by the Dominion Government's Orders-in-Council prohibiting importation of liquor and (after April 1st) inter-Provincial trade therein, with prospective prohibition of manufacture for beverage purposes, must be left to the future to tell. The new conditions are not yet exactly defined, especially with respect to the Province of Quebec. But apart from that Province, Ontario has a very long border line, over which, despite careful watching, much illicit importation may take place. The menace of illicit stills may also arise. Moreover, the increased restrictions and the hoped-for profits from illicit trade may operate as an incentive to the lawless and give the Board's officials an even more dangerous class of men to overcome than at present.

Under *The Ontario Temperance Act,* the Licensed Vendors, of whom there are four, are required to report semi-annually to the Board complete lists under oath of their sales of liquor, showing dates, amounts, names and addresses of people served and of physicians on whose prescriptions they were served, etc. All druggists, of whom there are about 1,250 in the Province, are required to furnish similar half-yearly reports, and 337 manufacturers who have received permits for

use of liquor or alcohol for manufacturing purposes, and brewers and distillers, and holders of liquor export warehouse permits, are obligated to furnish monthly reports. In addition to these the Board has arranged to obtain in some cases even more frequent reports, so that the trade is to a large extent passing in constant review before the Board, affording facilities for detection of irregularities which result in frequent seizures and confiscations as well as prosecutions under the more drastic sections of the Act. The Board has power, under the Act, to demand special reports from express agents and others, which power has occasionally been invoked. Manufacturers of native wines are dependent upon the Board for permits authorizing sale of their products subject to the Board's regulations.

Throughout the year, hearing of applications for relief under Section 145 of the Act against covenants in leases, has occupied much attention, and the Hon. the Attorney-General has instituted the practice of referring to the Board for report all petitions for clemency arising out of convictions under *The Ontario Temperance Act,* which have been presented to him. The correspondence of the Board, as may be inferred, is very heavy.

It will be seen that the granting of Standard Hotel licenses is now but one of many duties of the Board. Good hotels mean much to urban communities, more than some appear to realize. The Board trusts to be able to exert its influence to a greater extent in favour of a better solution of the hotel problem where possible, in encouraging better methods of management, etc. There is believed to be scope for much beneficial effort along these lines that will be welcomed by both municipalities and hotel licensees.

Inspectors and Staff.

The Board desires to express its appreciation of the services of the Local and Provincial Inspectors and Officers of the Staff who by faithful and sympathetic work have contributed very largely to make the Act a success. Efficient aid rendered to the Board's Inspectors by members of the Provincial Police, in enforcement of the Act, especially at frontier points, is also much appreciated by the Board.

Respectfully submitted,

J. D. Flavelle,

Chairman.

SCHEDULE A.

Statement showing number of convictions and dismissals of cases for infractions of the Liquor License Act against licensees and others from May 1st, 1916, to September 15th, 1916, inclusive.

(This statement does not include Local Option cases, which appear in Schedule B.)

License District.	Against Licensees.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Addington	1		3	
Algoma			3	
Brant, North		1	3	
Brant, South	1		4	
Brockville			2	
Bruce, North	2	2	5	
Bruce, South			1	
Carleton	1			
Dundas		1	2	
Elgin, East	3		5	
Elgin, West		1	2	
Essex, North	6	5	2	1
Fort William	1		1	
Glengarry			2	
Grey, Centre	1		2	
Grey, South	1			
Halton	3			
Hamilton	1		5	
Hastings, West	1		2	
Huron, North (a)			17	4
Huron, South (a)			5	
Kenora	2			1
Kent, East			1	
Kent, West	2		16	2
Kingston			10	8
Lambton, East		1		
Lambton, West	4			
Lanark, South		1	11	1
Leeds	1	1		
Lennox			3	1
Lincoln			4	
Manitoulin (a)			2	1
Muskoka	1		1	
Nipissing	6			
Norfolk, South	1			
Northumberland, East	1		4	
Ontario, North			1	
Ontario, South			8	
Ottawa	4	1		
Oxford, North	2			
Oxford, South			1	
Parry Sound, East	1			2
Parry Sound, West		1	8	1
Perth, North (a)			4	1
Peterboro, East			3	
Peterboro, West			4	1
Port Arthur	1		1	
Prescott	1		3	
Prince Edward	1		5	1
Rainy River	1		1	
Renfrew, North				1
Renfrew, South			12	
Russell	1		1	
St. Catharines			1	

SCHEDULE A.—*Continued.*

License District.	Against Licensees.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Sault Ste. Marie	1	.....	2	1
Simcoe, Centre	.....	.....	.....	1
Simcoe, South	4	.....	.....	.....
Stormont	2	.....	3	1
Sturgeon Falls	1	.....	1	.....
Sudbury	5	.....	11	.....
Temiskaming	1	.....	31	10
Toronto	.....	.....	8	.....
Victoria and Haliburton	.....	.....	6	1
Welland	.....	.....	6	2
Wellington, East	.....	1	2	1
Wellington, South	.....	1	2	1
Wellington, West	1	.....	1	.....
Wentworth, South	1	.....	.....	.....
Windsor	2	1	6	2
York, East	2	.....	.....	1
Totals	72	18	250	47

Included in the foregoing cases are those hereinafter set forth of prosecutions against inebriates who have been prohibited under the statute from getting or being supplied with liquor; also cases against licensees for delivering liquor to such inebriates: also cases against unlicensed persons for supplying such inebriates.

——	Convictions.	Dismissals.
Inebriates	86	9
Licensees	10	8
Unlicensed persons	18	3
Totals	114	20

SCHEDULE B.

Statement showing number of convictions and dismissals under charges of violations of Local Option By-laws from May 1st, 1916, to September 15th, 1916, inclusive.

Municipality.	License District.	Convictions.	Dismissals.
Yonge and Escott, Rear	Brockville	2	
Chesley	Bruce, Centre	2	
Amabel	Bruce, North	1	
Bruce, Township	"	3	1
North Gower	Carleton	1	
Grand Valley	Dufferin	1	
Melancthon	"	2	
Shelburne	"	2	
Iroquois	Dundas	2	1
Matilda	"	2	
Essex, Town	Essex	5	
West Tilbury	"	1	
Alexandria	Glengarry	4	5
Lancaster	"	1	
Lochiel	"	3	3
Maxville	"	1	
Augusta	Grenville	1	
Kemptville	"	3	
Artemesia	Grey, Centre	1	
Owen Sound	Grey, North	14	12
Saranak	"		1
Shallow Lake	"	1	3
Dundalk	Grey, South		1
Durham	"	1	1
Egremont	"	1	
Proton	"	2	
Thurlow	Hastings, East	1	1
Raleigh	Kent, West	7	4
Wyoming	Lambton, East	1	
Moore	Lambton, West		2
Sombra	"	2	
Almonte	Lanark, North	5	1
Carleton Place	"	3	1
Pakenham	"	1	
Bastard and Burgess	Leeds	5	1
Leeds and Lansdowne, Front	"	1	
Ernestown	Lennox and Addington	1	
Richmond	" "	2	
London, Township	Middlesex, East	1	
Adelaide	Middlesex, North	2	
Lucan	"	1	
Parkhill	"	2	
Strathroy	"	1	
Ekfrid	Middlesex, West	2	
Uxbridge, Town	Ontario, North	4	2
Uxbridge, Township	"		3
Pickering	Ontario, South	1	
Whitby, East	"	2	
Reach	"		1
Dummer	Peterboro, East	1	
Smith	Peterboro, West		1
Hillier	Prince Edward	1	
South Marysburgh	"	1	
Wellington	"	2	
Renfrew, Town	Renfrew, South	21	6
Orillia, Town	Simcoe, East	1	
Orillia, Township	"	2	
Tay	"	5	2
Alliston	Simcoe, West	4	
Stayner	"	1	
Osnabruck	Stormont	3	

SCHEDULE B.—*Continued.*

Municipality.	License District.	Convictions.	Dismissals.
Bobcaygeon	Victoria and Haliburton	2	
Eldon	" "	3	
Mariposa	" "	2	
Omemee	" "	2	
Somerville	" "	1	
Galt	Waterloo, South	2	2
Thorold, Township	Welland	1	
Erin, Township	Wellington, East	4	2
Garafraxa, West	"	2	
Maryborough	Wellington, West	2	
Totals		165	57

SCHEDULE B (a).

The following are cases of convictions and dismissals under charges of violations of The Canada Temperance Act during the period from May 1st, 1916, to September 15th, 1916.

License District.	Convictions.	Dismissals.
Huron, North	6	9
Huron, South	7	1
Manitoulin	5	2
Peel	2	
Perth (excluding City of Stratford)	3	2
Totals	23	14

SCHEDULE C.

Statement showing number of convictions and dismissals of cases for infractions of the Ontario Temperance Act from September 16th, 1916, to September 30th, 1917, inclusive.

License District.	Against Holders of Standard Hotel Licenses.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Algoma	.....	.....	54	6
Brant	.....	.....	162	21
Bruce	1	.....	38	16
Carleton	1	.....	7	.....
Chatham and part Co. Kent	.....	1	27	10
Dufferin and part Co. Simcoe	.....	.....	18	10
Dundas	2	.....	38	3
Elgin	1	.....	47	9
Essex	5	.....	53	8
Frontenac, including Kingston	.....	.....	61	9
Grenville	.....	.....	53	1
Grey	2	.....	52	52
Guelph and part Co. Wellington	.....	.....	31	3
Halton	.....	.....	36	3
Hamilton and part Co. Wentworth	3	2	44	4
Hastings	.....	.....	33	2
Huron, North (under Canada Temperance Act)	.....	.....	18	2
Huron, South (under Canada Temperance Act)	.....	.....	18	1
Kent	.....	.....	13	.....
Kenora	7	3	6	2
Lambton, East	.....	.....	29	4
Lambton, West	.....	.....	106	4
Lanark	.....	1	34	21
Leeds, including Brockville	.....	.....	140	26
Lennox and Addington	.....	1	46	3
Lincoln	.....	1	19	7
Manitoulin (Canada Temperance Act)	.....	.....	9	5
Middlesex, including London	.....	1	69	8
Nipissing	.....	.....	78	4
Niagara Falls and part Co. Welland	.....	.....	102	3
Norfolk and Haldimand	3	9	25	20
Northumberland and Durham	.....	.....	41	7
Ontario	1	.....	51	8
Ottawa, including Eastview	1	.....	10	2
Oxford	1	.....	25	3
Parry Sound	1	.....	102	21
Peel (under Canada Temperance Act)	.....	.....	1	.....
Perth (under Canada Temperance Act), including Stratford (Ontario Temperance Act)	.....	1	44	.....
Peterboro	1	.....	39	12
Port Arthur and Fort William	3	2	30	6
Prescott	3	.....	12	3
Prince Edward and part Co. Hastings	6	.....	61	7
Rainy River	1	.....	37	8
Renfrew	2	.....	81	24
Russell	6	.....	9	5
Sault Ste. Marie	1	.....	61	5
Simcoe and Muskoka	3	.....	72	12
Stormont and Glengarry	.....	.....	85	29
Sudbury	7	.....	166	80
Temiskaming	.....	.....	407	48
Toronto	2	1	56	11

SCHEDULE C.—*Continued.*

License District.	Against Holders of Standard Hotel Licenses.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Victoria and Haliburton	3	3	68	10
Waterloo	3	1	16	7
Welland	.....	.....	86	2
Wellington	3	.....	36	.....
Wentworth	1	.....	25	6
Windsor	3	1	41	11
York	3	.....	7	.....
Totals	80	28	3,135	594

Included in the foregoing cases are 2,011 convictions and 183 dismissals under charges of being found in a public place in an intoxicated condition.

SCHEDULE C (a).

Statement showing number of convictions and dismissals under charges of violations of the Canada Temperance Act from September 16th, 1916, to September 30th, 1917, inclusive.

License District.	Convictions.	Dismissals.
Huron, North	10	4
Huron, South	30	2
Manitoulin	20	1
Peel	11	7
Perth (excluding the City of Stratford)	30	3
Totals	101	17

SCHEDULE D.

Statement showing amounts collected and paid to the Province for fines imposed under the Ontario Temperance Act, in each License District, to 31st October, 1917.

Algoma	$3,167 35	Peterborough	$3,185 00
Brant	2,380 00	Peterborough, East	100 00
Bruce	2,395 00	Port Arthur	7,925 00
Carleton	650 00	Prescott	1,080 00
Chatham	1,300 00	Prince Edward	4,940 00
Dufferin	2,010 00	Rainy River	2,435 00
Dundas	3,335 00	Renfrew	7,022 15
Elgin	2,006 00	Russell	1,883 50
Essex	3,945 00	Sault Ste. Marie	7,780 00
Frontenac	2,750 00	Simcoe and Muskoka	3,293 16
Grenville	1,052 00	Stormont and Glengarry	4,092 10
Grey	3,942 86	Sudbury	18,270 00
Guelph	1,060 00	Temiskaming	12,110 00
Halton	556 00	Toronto	5,720 00
Hamilton	7,840 00	Victoria and Haliburton	2,421 55
Hastings	1,385 00	Waterloo	2,240 00
Kent	670 00	Welland	3,380 00
Kenora	1,210 00	Wellington	1,530 00
Lambton East	1,420 00	Windsor	6,479 50
Lambton West	1,885 00	Wentworth	735 00
Lanark	1,977 75	York	1,920 00
Leeds	5,118 69		
Lennox and Addington	2,855 00	ADDITIONAL.	
Lincoln	2,630 00		
Middlesex	3,058 00	Manitoulin	$266 00
Nipissing	3,017 00	Huron, North	741 16
Niagara Falls	5,696 00	Huron, South	221 10
Norfolk and Haldimand	1,780 00	Perth	985 00
Northumberland & Durham	2,031 00	Provincial Officers	1,894 94
Ontario	1,995 00	Peel	10 00
Ottawa	860 00	Sundry Magistrates	1,897 68
Oxford	1,562 00		
Parry Sound	2,605 00	Total	$184,717 49

SCHEDULE E.

Statement showing expenses of enforcing Ontario Temperance Act in each License District to 31st October, 1917.

Algoma	$1,967 80	Ontario	$1,753 24
Brant	2,007 61	Ottawa	2,032 25
Bruce	2,405 33	Oxford	1,450 33
Carleton	1,494 55	Parry Sound	2,063 66
Chatham	1,645 17	Peterborough	1,782 37
Dufferin	2,541 13	Provincial Officer, East Peterborough (from 22nd August, 1917)	110 97
Dundas	1,125 47		
Elgin	1,873 37		
Essex	2,012 05	Port Arthur	1,950 15
Frontenac	2,307 30	Prescott	1,239 52
Grenville	1,370 32	Prince Edward	2,193 08
Grey	2,533 99	Rainy River	1,208 67
Guelph	1,908 22	Renfrew	2,019 07
Halton	1,134 80	Russell	1,598 49
Hamilton	2,876 72	Sault Ste. Marie	2,051 59
Hastings	1,773 24	Simcoe and Muskoka	2,838 47
Kent	674 21	Stormont and Glengarry	2,638 44
Kenora	1,096 52	Sudbury	4,827 34
Lambton, East	762 93	Temiskaming	2,702 22
Lambton, West	2,362 72	Toronto	7,012 56
Lanark	2,219 16	Victoria and Haliburton	2,015 47
Leeds	2,569 13	Waterloo	1,912 79
Provincial Officer for Leeds and Grenville and Stormont, Dundas and Glengarry	1,678 85	Welland	1,079 85
		Wellington	1,009 10
		Windsor	3,110 35
Lennox and Addington	1,641 47	Wentworth	1,140 29
Provincial Officer for Addington	912 86	York	1,857 68
Lincoln	1,931 99	ADDITIONAL.	
Middlesex	2,809 04	Huron, North	$284 36
Nipissing	1,929 06	Huron, South	141 97
Niagara Falls	1,471 57	Perth	605 26
Norfolk and Haldimand	2,434 59		
Northumberland & Durham	1,952 88	Total	$112,053 59

SCHEDULE F.

Statement showing revenue from License Branch for the year ending 31st October, 1917.

Vendors' License Fees	$20 00	Seized Liquor	$2,446 29
Standard Hotel Fees	2,854 00	Deferred Balances	2,509 06
Fines	184,702 49		
		Total	$192,531 84

SCHEDULE G.

Showing fines imposed under the Ontario Temperance Act, paid to the Municipalities where special officers have been appointed under Sec. 120 of the Ontario Temperance Act.

Amherstburg	$291 00	Hanover	$240 00
Arnprior	160 00	Hawkesbury	1,140 13
Aylmer	591 80	Hastings, V.	.....
Acton	10 00	Hepworth	.....
Ailsa Craig	20 00	Humberstone	.....
Brantford	5,746 80	Huntsville	280 00
Bancroft	110 00	Ingersoll	830 00
Bowmanville	246 00	Iroquois Falls	2,510 00
Brighton V.	10 00	James Twp.	544 00
Brockville	4,351 70	Kenora	285 00
Blenheim	20 00	Kincardine, Town	85 00
Belleville	1,150 00	Kitchener	3,137 50
Bradford	70 00	Kingston City	2,732 00
Blind River	707 00	Kingston Twp.	.....
Burlington	661 25	Kent County	875 00
Burk's Falls	20 00	Keewatin	.....
Bridgeburg	310 00	Leamington	365 00
Barrie	368 61	Lucknow	100 00
Blandford	.....	London	12,687 85
Bayham	.....	Lucan	100 00
Cobourg	500 00	Lanark, V.	65 00
Colborne	.....	Lakefield	20 00
Carleton Place	549 00	Lindsay	220 00
Cobalt	3,920 00	McDougall, Tp.	1,080 00
Cochrane	1,430 15	Mattawa	290 00
Courtright	.....	Midland	1,448 00
Copper Cliff	2,660 00	Madoc	780 00
Chapleau	300 00	Massey	1,026 25
Campbellford	400 00	Merritton	10 00
Chesley	627 50	Meaford	220 00
Cardinal	.....	Matheson	20 00
Charlton	.....	North Bay	460 00
Coldwater	200 00	Niagara Falls	7,560 00
Cornwall	355 00	Napanee	390 00
Cayuga	.....	Niagara, Tn.	185 00
Collingwood, Town	670 00	New Liskeard	245 00
Cannington	80 00	Nepean, Tp.	10 00
Chatham	886 00	Neustadt	.....
Clifford	10 00	Neeland & Garson	845 00
Crowland Tp.	1,570 90	Norwood	.....
Dunnville	.....	Newmarket	400 00
Dresden	90 00	North Norwich	.....
Dutton	290 00	Ottawa	16,406 00
Drury, Denison & Graham..	1,080 00	Orangeville	311 85
Dundas, Town	425 00	Oshawa	775 00
Dryden	.....	Oakland Tp.	.....
Eastview	400 00	Owen Sound	555 00
Englehart	.....	Oxford, West Tp.	97 00
Elmira	60 00	Oakville	600 00
Edwardsburg	60 00	Port Arthur	8,775 00
Elora	55 00	Preston	1,110 00
Fort William	9,267 00	Picton	500 00
Ford City	820 00	Pakenham	.....
Fort Erie	90 00	Paris	510 00
Fort Frances	100 00	Parry Sound	3,855 07
Galt	1,530 00	Port Hope	510 00
Guelph	1,240 00	Peterborough	5,680 00
Gananoque	860 00	Pembroke	1,760 00
Georgetown	150 65	Petrolia	360 00
Hamilton	28,450 00	Perth	120 00
Hespeler	835 00	Portsmouth	.....
Hagersville	.....	Port Perry	110 00
Haileybury	660 00	Port Stanley	660 00

SCHEDULE G—*Continued.*

Prescott	$790 00	Toronto	$69,630 00
Parkhill	.....	Tillsonburg	398 00
Paisley	.....	Trenton	3,096 00
Port Colborne	3,757 50	Tisdale Tp.	3,699 00
Port Rowan	.....	Timmins	2,170 00
Point Edward	.....	Thamesville	200 00
Penetanguishene	1,065 00	Thessalon	325 00
Port McNicoll	350 00	Thorold Tn.	2,420 00
Renfrew	1,999 50	Tavistock	.....
Rainy River, Tn.	.....	Thorold Tp.	1,010 00
Rayside Tp.	.....	Vankleek Hill	40 00
Sault Ste. Marie	8,083 75	Woodstock	2,105 00
Sturgeon Falls	140 00	Walkerville	455 00
Sarnia	8,610 00	Woodhouse	.....
Steelton	978 00	Wallaceburg	1,400 00
Sudbury	6,355 00	Wiarton	57 00
St. Catharines	3,632 00	Welland Tn. (from 14th May, 1917)	1,260 00
St. Thomas	3,295 00	Windsor	9,015 00
Smith's Falls	2,575 00	Walkerton	10 00
Stratford	5,430 00	Waterloo	280 00
Simcoe	100 00	West Zorra	200 00
St. Vincent	.....	Whitby, Tn.	.....
Sandwich	490 00		
Sherbrooke, South Tp.	.....	Total	$305,466 76
Sioux Lookout	600 00		
St. Mary's	100 00		

A table showing the number of commitment

Name of gaol.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	189
Barrie	31	35	16	28	46	34	34	19	
Belleville	45	34	51	67	39	49	34	18	
Brantford	28	91	112	147	218	182	112	89	1
Brampton	21	8	10	24	28	30	17	.....	
Brockville	80	36	24	31	52	58	44	44	
Bracebridge	67	7	7	3	25	15	19	5	
Cayuga	18	15	17	24	25	15	22	7	....
Cornwall	3	1	4	7	29	25	14	22	
Cobourg	26	15	6	12	28	38	22	25	
Chatham	13	14	7	9	61	71	47	26	
Fort Frances	.....	.....	.....	.....	.....	.....	.....	.....	....
Goderich	3	4	.....	4	2	5	5	2	
Guelph	32	12	22	21	10	10	4	14	
Gore Bay	.....	.....	4	3	1	4	1	2	
Hamilton	368	335	373	429	401	418	251	142	1
Kingston	74	58	108	107	139	120	125	87	1
Kitchener	7	4	8	12	20	17	13	4	
Kenora	37	53	56	73	74	66	66	81	
London	277	338	404	408	540	332	213	150	2
Lindsay	30	1	1	4	3	5	1	5	
L'Orignal	3	1	.....	.....	2	.....	5	1	
Milton	9	13	5	19	13	9	9	6	
Napanee	6	3	8	7	4	22	23	12	
North Bay	.....	.....	.....	.....	28	35	16	14	
Ottawa	205	280	286	297	276	326	204	182	1
Owen Sound	36	20	21	29	37	17	13	14	
Orangeville	1	3	3	1	4	2	1	2	....
Perth	6	4	9	4	2	5	5	3	
Picton	41	54	20	45	38	33	19	11	
Pembroke	11	2	2	.....	4	1	.....	5	
Peterborough	27	13	11	26	20	45	24	22	
Port Arthur	66	30	28	16	18	12	4	3	
Parry Sound	.....	.....	1	1	16	9	.....	2	
Simcoe	4	6	5	3	17	3	10	5	
St. Catharines	29	21	21	28	33	24	12	9	
Sarnia	130	72	38	64	99	108	95	27	
Stratford	17	15	12	9	16	14	4	7	
Sandwich	47	31	25	46	47	35	57	38	
St. Thomas	57	30	25	29	23	20	32	12	
Sault Ste. Marie	2	1	74	103	30	12	10	12	
Sudbury	.....	2	8	27	45	55	77	5	1
Toronto	1,707	1,705	2,116	2,098	2,096	2,085	1,783	1,444	1,2
Walkerton	.....	2	6	22	8	6	7	3	
Woodstock	21	28	50	64	55	51	34	24	
Welland	3	40	32	12	21	16	7	13	
Whitby	4	.....	.....	.....	5	2	.....	1	
Lock-ups:									
Atikokan	.....	.....	.....	.....	.....	.....	.....	.....	....
Burk's Falls	.....	.....	.....	.....	3	1	.....	.....	....
Byng Inlet	.....	.....	.....	.....	.....	.....	.....	.....	....
Cobalt	.....	.....	.....	.....	.....	.....	.....	.....	....
Killarney	.....	.....	.....	.....	.....	.....	.....	.....	....
Manitowaning	3	13	5	11	18	33	33	22	
Mine Centre	....	.....	.....	.....	.....	.....	.....	.....	....
Webbwood	....	.....	.....	.....	.....	.....	.....	.....	....
Totals	3,598	3,450	4,041	4,374	4,719	4,475	3 528	2,641	2,5

SCHEDULE H.

s to each gaol for drunkenness during the years 1885 to 1917, both inclus

3.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	90
0	21	9	24	21	11	10	16	12	21	14	1
4	25	19	16	12	13	16	12	11	20	6	1
0	125	124	106	115	85	64	88	74	82	136	16
9	9	11	6	2	3	4	4	4	5	3	
7	86	70	43	48	49	45	41	58	66	55	5
5	5	4	4	3	2	3	.....	5	5	9	
....	5	6	6	9	10	13	10	19	12	5	1
7	10	24	9	11	28	21	19	12	15	18	1
1	19	18	16	12	15	20	10	16	14	12	1
8	22	67	9	13	13	15	18	18	11	9	
....	.....	.....	.....	.....	.....	.....	.....	.....	33	.....	...
3	3	.....	.....	2	1	2	5	5	1	2	
9	23	17	7	9	9	3	13	4	13	4	
1	2	3	.....	.....	.....	.....	.....	.....	1	3	
8	55	36	60	56	60	66	96	108	97	188	23
2	72	89	49	51	50	48	31	47	40	58	6
6	7	7	10	12	10	7	4	4	11	15	1
5	65	31	76	26	111	110	23	31	36	37	3
8	219	187	177	139	163	172	137	137	250	157	26
2	5	2	5	4	5	6	7	8	8	8	1
2	1	3	2	2	.....	2	2	.....	3	1	
4	8	3	8	3	4	2	4	4	4	8	1
9	20	8	6	5	13	4	7	4	7	3	
5	7	10	5	.....	4	.....	3	12	5	73	9
5	111	157	152	165	137	135	224	293	221	267	24
1	6	.....	8	6	11	7	8	12	16	13	1
....	.....	.....	.....	.....	1	.....	3	.....	.....	.....	...
2	3	6	2	2	7	9	7	12	17	34	2
1	21	11	22	31	23	30	35	19	21	18	1
7	4	7	3	5	5	.....	1	4	1	7	
6	15	13	10	11	11	10	6	13	9	14	2
4	1	3	5	12	4	2	9	8	7	50	2
4	5	7	2	3	3	5	8	4	5	25	1
3	11	17	6	6	16	10	11	6	12	11	1
1	17	26	23	5	17	10	15	33	21	28	2
6	69	116	57	62	49	61	48	45	71	57	6
9	15	7	10	15	5	1	9	12	8	15	1
1	19	39	16	23	20	16	27	18	31	42	2
5	19	22	13	12	8	17	23	9	6	5	
8	5	2	12	9	8	7	7	21	16	79	1
9	38	42	25	41	34	54	197	222	172	49	16
7	960	918	790	569	592	796	1,031	1,022	1,107	1,286	1,57
3	8	21	5	3	1	4	4	.....	1	1	
8	21	29	37	35	32	31	21	39	36	41	3
2	11	19	17	16	14	19	20	24	23	24	8
2	1	2	.....	1	4	5	2	3	5	2	1
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
....	.. ....	2	1	.....	1	.....	.....	4	1	1	...
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
16	5	16	4	2	4	5	7	10	12	3	
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
....	.....	.....	9	7	6	2	9	17	48	17	1
75	2,174	2,236	1,873	1,596	1,672	1,869	2,282	2,446	2,627	2,913	1,45

The figures for 1916 and 1917 are compared, and the increase or decre

04.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913	1914
16	27	46	58	39	29	59	51	57	64	140
12	6	15	34	67	33	61	89	56	110	63
62	143	153	239	178	148	122	129	161	131	108
4	8	10	5	1	5	1	10	8	14	2
50	50	91	86	63	40	54	59	49	83	62
8	13	7	3	9	6	6	3	1	3	4
11	10	13	7	4	3	5	5	6	4	5
17	14	7	7	12	32	16	10	9	16	27
12	7	18	21	16	27	36	22	35	39	36
8	16	16	27	28	20	36	36	44	46	83
....	42	.....	15	15	16	28	55	57	184	119
8	14	3	1	3	18	5	8	6	13	6
6	12	7	6	4	5	10	7	3	9	16
3	.....	6	2	7	2	.....	5	1	.....	.....
29	287	290	394	360	413	479	580	702	986	603
62	59	54	66	64	83	109	90	107	135	129
10	17	19	9	12	15	13	18	24	30	48
21	19	19	88	92	33	6	15	101	25	19
62	249	218	218	328	424	325	395	361	483	500
10	10	2	6	11	8	12	39	7	3	9
3	1	2	.....	1	1	.....	2	1	5	2
12	7	11	6	6	8	7	4	12	11	12
5	8	13	12	19	21	18	21	23	25	45
99	171	73	103	46	38	40	18	88	90	93
47	338	257	338	425	380	408	307	324	248	346
10	5	6	10	13	15	41	73	65	18	17
.....	.....	1	.....	.....	.....	.....	1	3	1	1
20	2	20	24	27	17	19	8	20	31	22
18	28	28	21	42	25	33	31	26	28	32
1	6	7	8	11	20	7	8	20	50	50
23	13	24	33	22	27	23	40	37	119	143
25	27	67	164	183	209	195	232	301	434	444
10	35	153	68	26	25	28	35	50	58	55
15	12	13	28	50	37	37	39	41	8	32
20	33	20	20	25	43	42	73	67	60	102
69	67	73	69	59	80	92	76	90	157	237
19	46	35	21	42	24	29	29	36	67	73
29	19	32	29	38	23	28	32	31	65	44
8	2	4	3	12	15	19	11	5	17	48
15	38	18	32	47	23	32	49	66	75	73
64	117	253	231	223	268	288	316	508	1,054	1,643
575	1,832	1,923	2,016	2,003	2,208	2,398	2,669	2,866	3,209	3,073
1	.....	5	8	4	4	6	9	6	5	4
31	22	17	24	34	31	32	41	45	52	77
87	32	24	23	28	21	26	29	55	60	131
11	10	29	12	8	18	14	12	8	10	17
....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
1	4	3	5	2	.....	7	4	1	.....	.....
.....	5	.....	.....	.....	.....	.....	11	.....	1	.....
.....	.....	.....	.....	.....	.....	29	25	10	1	20
.....	8	.....	10	10	16	4	3	.....	2	.....
6	21	.....	9	9	8	1	2	7	20	.....
.....	10	.....	23	.....	12	5	.....	6	4	3
14	16	18	56	8	.....	.....	.....	.....	.....	.....
452	3,941	4,133	4,748	4,736	4,987	5,291	5,827	6,613	8,363	8,848

ıse in each place is shown.

1915	1916	1917	Increase. 1917.	Decrease 1917.	Name of gaol.
73	43	6	.....	37	Barrie.
106	57	23	.....	34	Belleville.
162	193	25	.....	168	Brantford.
11	4	4	.....	.....	Brampton.
56	60	12	.....	48	Brockville.
1	.....	1	1	.....	Bracebridge.
7	10	1	.....	9	Cayuga.
20	9	7	.....	2	Cornwall.
16	60	22	.....	38	Cobourg.
55	84	27	.....	57	Chatham.
52	42	30	.....	12	Fort Frances.
13	8	2	.....	6	Goderich.
14	2	.....	.....	2	Guelph.
3	4	.....	.....	4	Gore Bay.
494	761	129	.....	632	Hamilton.
203	115	28	.....	87	Kingston.
34	32	18	.....	14	Kitchener.
7	8	4	.....	4	Kenora.
520	473	155	.....	318	London.
5	3	1	.....	2	Lindsay.
1	1	1	.....	.....	L'Orignal.
4	8	3	.....	5	Milton.
18	18	.....	.....	18	Napanee.
55	19	8	.....	11	North Bay.
281	177	391	214	.....	Ottawa.
24	10	10	.....	.....	Owen Sonnd.
1	.....	1	1	.....	Orangeville.
19	13	.....	.....	13	Perth.
47	50	2	.....	48	Picton.
44	27	13	.....	14	Pembroke.
87	71	11	.....	60	Peterborough.
212	111	42	.....	69	Port Arthur.
79	516	35	.....	481	Parry Sound.
25	26	2	.....	24	Simcoe.
82	80	31	.....	49	St. Catharines.
138	132	115	.....	17	Sarnia.
34	36	5	.....	31	Stratford.
31	28	116	88	.....	Sandwich.
30	12	4	.....	8	St. Thomas.
75	39	59	20	.....	Sault Ste. Marie
658	531	211	.....	320	Sudbury.
2,217	1,939	2,217	278	.....	Toronto.
9	4	2	.....	2	Walkerton.
69	86	9	.....	77	Woodstock.
110	30	95	65	.....	Welland.
14	16	2	.....	14	Whitby.
					Lock-ups:
.....	.....	.....	.....	.....	Atikokan
.....	.....	.....	.....	.....	Burk's Falls.
4	6	3	.....	3	Byng Inlet.
11	13	22	9	.....	Cobalt
.....	.....	.....	.....	.....	Killarney.
.....	.....	.....	.....	.....	Manitowaning
4	1	2	1	.....	Mine Centre.
.....	.....	.....	.....	.....	Webbwood.
6,235	5,968	3,907	677	2,738	Totals.

Net decrease 2,061

REPORT

OF THE

Minister of Agriculture

PROVINCE OF ONTARIO

FOR THE YEAR ENDING
OCTOBER 31, 1917

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS Printer to the King's Most Excellent Majesty
1918

Motor bus for use of returned soldiers, presented to Military Hospitals Commission by Minister of Agriculture, on behalf of children of rural school fairs where money was raised by sale of patriotic buttons.

REPORT

OF THE

Minister of Agriculture, 1917

To His Honour Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I have the honour to submit the Annual Report for this Department for the year ending October 31, 1917.

In so doing I am glad to be able to note that the past year has been one of the best in the history of Ontario agriculture, measured either by the crop production or the aggregate returns. Certain sections and certain crops suffered by unfavorable conditions, some very severely, but on the whole there is reason for satisfaction. Compared with the very unfavorable season of 1916 the following increases in acreage are shown:

	Acres.
Field crops, exclusive of hay and clover	97,784
Hay and clover	75,704
Pasture	100,364
Total increase	273,852

In addition to this it is of interest to note the progress which the Province has made in production under war conditions. A comparison of the total acreage for three crop seasons during the progress of the war with the three crop seasons immediately preceding shows the following average yearly increases:

	Acres.
Hay and clover	13,242
Field crops, exclusive of hay and clover	85,670
Total field crops	98,912
Pasture	254,875

In other words crops have been taken from an annual average of nearly 100,000 acres more each year since war began than in the three years immediately preceding. In view of the enlistments from the rural sections and in view of the labor shortage and other handicaps, this is a striking tribute to the energy and patriotism of the farmers of the Province.

WORK OF THE DEPARTMENT

During the past year the food situation overseas has become more acute and the call for supplies from this continent more insistent. This call has dominated the work of this Department, as it must continue to dominate it as long as the struggle continues. With all the resource and energy at its command the Department has sought to assist in responding to this call, realizing full well that it could only do so by working with and through the men on the land. In every

branch emphasis has been placed on the needs of the war, while at the same time the regular work has been maintained as far as possible. Reference may be made here, however, to special features looking particularly to increased production, and it should be noted that in all these the Department has worked in co-operation with the Resources Committee created by statute of the Legislature.

Labor. Most important and most difficult of the problems of increasing production is labor. While this is administered under the Labor Branch attached to another Department, we have assisted in every way possible. The local offices of the Department have been distributing centres for farm labor and have rendered real service to the farmers in this way. Aside from placing men sent out from the central office, they have been influential in securing seasonal help locally, one office alone placing 300 men during the harvest period.

One of the 130 tractors operated by the Department.

Then partially as a means of relieving the labor shortage and partially as a demonstration, it was decided to purchase a number of tractors and ploughs and place them at the disposal of the farmers to do work on a cost basis. This decision was made in the spring, it being stipulated that a sufficient number of farmers in a district should signify their desire to have land ploughed so as to assure an outfit being kept busy for at least a month or two in a limited area. Requests kept coming in for this service all season and the Department purchased in all 127 tractors of about fourteen different makes. More detailed reference is made in another part of this report to the work of these machines, and it may suffice to state here that in all between 20,000 and 25,000 acres were ploughed during the season in spite of the handicap of much adverse weather and many inexperienced operators. In addition to this, thousands of farmers in all sections of the Province have had an opportunity to observe the operation of this modern mechanical device for the first time under ordinary farm conditions. This in itself is of great value. Many improvements will no doubt be made but the consensus of opinion is that there is a place on thousands of Ontario farms for an efficient but not too expensive light tractor.

Seed. Special efforts were made by the Department to facilitate the distribution of seed. The nature of the previous harvest necessitated more attention than usual to this subject and the District Officers of the Department were able to do very useful work in supplementing the regular trade channels of seed distribution. Farmers were invited to communicate with District Offices as to any seed they might have for sale or as to any they might desire to purchase, and in this way the exchange of thousands of bushels was effected to mutual advantage. In the special matter of potatoes it was necessary to secure a large supply from outside the Province, and between forty and fifty carloads were distributed as a result of the efforts of the Department. In this as in other matters the Department did not go into the business of buying and selling, but was able to do equally as effective work in placing the purchasers in touch with sources of supply. In this connection I might also note that action was taken to assist those who were financially handi-

Garden plots in one of the best residential sections of an Ontario city.

capped in securing seed. Applications were received from those who claimed they had the land and the equipment but were unable, through lack of funds, to purchase the seed. These applications of course were not comparatively numerous, but at a time when maximum production is desired it is not well to refuse aid in any practical line which seems to offer results. Accordingly, in co-operation with my colleague the Provincial Treasurer, an arrangement was made with the Bankers' Association by which the banks agreed to loan up to $200 to each individual for the purchase of seed grain. Each case was investigated by the bank and in this way the maximum safeguard was supplied. The banks also undertook to make collections in the fall with interest. In all slightly less than $150,000 was loaned by this means and the greater proportion of it has already been paid. There is no doubt but that it contributed materially towards the production of foodstuffs where such production would not otherwise have taken place.

Backyard Gardening. While every practical means was thus taken to assist and stimulate maximum production on the farms of the Province, it was felt that

there could be greatly increased production in the backyards and vacant lots of cities, towns and villages. Production in this way did not require a new body of labor but merely called into productive use time and energy which might otherwise be used without any productive results. With these ideas in mind it was possible to urge the maximum organization in the urban centres with a view to the growing mainly of course of garden stuffs, which, however, served to relieve the demand on other more concentrated foods which might be exported. Local organizations of various kinds were invited to co-operate in the work and extensive publicity was adopted to impress the idea on all the citizens of the Province and give information as to how it might be carried out to the best advantage. The matter was taken up very generally. The Department supplemented the organization by distributing information as to methods to be adopted, and in all 100,000 pieces of literature were distributed. The season was reasonably favorable, and while it is not possible to set down in figures of any great accuracy just the total amount of foodstuffs realized, there is no doubt but what a substantial contribution was made to the food supply of the Province in this way. Furthermore, the canning demonstrations and education which accompanied the garden campaign resulted in a large proportion of the crop grown being carried through the winter months.

POTATO IMPROVEMENT

Very important work has been done during the past year looking to the improvement of the potato crop of the Province. For some years past it has been recognized that one of the chief drawbacks of the Ontario potato crop, from a commercial standpoint, was the large number of varieties which were grown and the lack of uniformity. This prevented marketing to advantage because it made it impossible to ship carload lots of standard varieties from individual points. The matter was, therefore, taken up during the season with a view to determining standards and inaugurating educational work which would result in the course of a few years in having these standard varieties generally adopted by the growers. First, a careful survey of the potato situation in the Province was made by technical experts of the Department. This survey revealed two outstanding facts. First, that the seed secured from New Ontario and planted in Old Ontario produced better results than Old Ontario seed, and, second, that the potato industry was being menaced by two or three insidious diseases which had not been previously understood to prevail in Ontario. This survey was followed by conferences to which the technical experts who had been working with the various branches of the potato industry and the practical growers sat down together and threshed out the various points involved. The result was that two main varieties were adopted, namely, Irish Cobbler for early potatoes and Green Mountain for late. At the same time the Committee recognized Early Ohio as suitable for market gardeners who desired particularly early returns, and Carmen No. 1, Dooley and Rural New Yorker as later varieties which might be continued in districts where they had been found to be particularly suitable.

It was further decided to encourage the use of New Ontario seed to the greatest possible extent, and it is anticipated that New Ontario will not only develop a prosperous potato industry, but also assist in the prosperity of the industry in Old Ontario as well. For the present season, however, it was found that there was a comparatively small quantity of suitable seed available in New Ontario, and hence it would be necessary to bring in seed from the eastern provinces. Steps were taken to secure the inspection of this seed and place the growers in touch with carload lots of the varieties decided upon reasonably free from disease. Subsequently edu-

cational work will be undertaken to secure the adoption of the varieties mentioned and to combat the diseases.

In the course of the investigation it was found that diseases previously unsuspected in Ontario were becoming quite prevalent in some sections. These are the so-called "physiological diseases," Leaf Roll, Mosaic and Curly Dwarf. In order that they may be studied and prevented by the growers the following information is supplied by the Professor of Botany:

Leaf Roll. The cause of this disease is unknown. It has been observed in numerous fields in the potato growing districts of old Ontario. In some fields examined this summer (1917), over 60 per cent. of the plants were affected with Leaf Roll.

Experiments and observations show that Leaf Roll may reduce the yield to a very marked extent. In experiments conducted by Mr. Murphy, Assistant in charge of the Dominion Laboratory of Plant Pathology at Charlottetown, P.E.I., it was found that the average yield of plants diseased with Leaf Roll in Prince Edward Island is 1.66 ounces, while healthy plants of the same variety yield 19.0 ounces. The corresponding yields per acre would be 26 bushels and 297 bushels.

Field of potatoes in New Ontario.

Symptoms of Leaf Roll are very variable. Affected plants are always more or less dwarfed, and in some varieties the leaves assume a characteristic upright, almost staring habit, instead of drooping over in the normal way. This symptom is sometimes absent, the plants presenting instead a low headed, bushy appearance. When the crop is badly affected the poor growth of the foliage is very noticeable. It is practically never as green on affected plants as on healthy ones and occasionally on certain varieties it takes on a purplish or reddish color at the tips and around the margins of the leaves. Rolling of the lower leaves is always associated with the disease. This is often rather inconspicuous and may not extend beyond the leaves lying close to the ground, although it may affect the intermediate and even the topmost leaves. Marked rolling of the upper leaves, however, is often seen on plants not affected with Leaf Roll. The rolled leaves on plants affected with this disease begin to die early. The harsh, leathery texture of such leaves is a constant symptom. This point may be tested by feeling them with the fingers. The tubers of affected plants are small and are borne generally on very short tuber-branches (stolons) or even attached in a cluster to the stem.

Leaf Roll is chiefly transmitted through the seed. Tubers from affected plants invariably produce diseased plants. There is also evidence to show that the disease may spread from plant to plant in the field. Just how is unknown, as up to the present time no parasite has been found associated with Leaf Roll.

The surest way of avoiding loss from Leaf Roll is to secure fresh seed from districts free from the disease. Fortunately, this is possible, as Northern Ontario and certain

sections of New Brunswick, Nova Scotia and Prince Edward Island are comparatively free from this trouble.

Mosaic. The cause of this disease is also unknown. It has been observed in many fields in Ontario. When it is severe there is a very noticeable reduction in the crop.

The foliage of plants affected with Mosaic is somewhat wrinkled or corrugated and mottled, with faint, light green or yellowish spots. These symptoms vary considerably, being well marked in some cases and not so noticeable in others. The stalks of diseased plants are often more bare near the ground than those of healthy ones, partly because the affected foliage does not spread out and droop down normally and partly because the lower leaves sometimes fall off in the last stages of severe attacks. The tubers of affected plants are normal looking and sound and their keeping or eating qualities are not impaired.

Like Leaf Roll, Mosaic is transmitted through the seed and is spread very largely by the use of seed from diseased plants. It is also spread from plant to plant in the field, probably by insects as is the case with related diseases.

If the disease is not very prevalent in a field, remove the affected plants so as to secure seed as free as possible from Mosaic. If the Mosaic is very abundant, secure fresh seed from a field or district free from the disease. It may be necessary to discard susceptible varieties in order to avoid loss from Mosaic.

Curly Dwarf. Another disease of unknown cause frequently met with in Ontario, especially in unthrifty fields of potatoes. It appears to cause a very noticeable reduction in the crop. Plants affected with Curly Dwarf are dwarfed and the foliage is markedly curled and wrinkled. This disease is known to be transmitted through the seed.

Remove affected plants so as to secure seed free from Curly Dwarf or secure fresh seed from a field or district free from the disease.

MOTION PICTURES ADOPTED

Motion pictures have, during the past year, been adopted as part of the equipment of the Department for educational purposes. The value of motion pictures for purposes of education as well as for purposes of entertainment has been generally recognized, but as far as I am aware this Department is the first provincial or state department to adopt the plan as a means of furthering agricultural education. Having adopted the idea, every effort will be made to make it as effective as possible. A projection machine has been selected which can be used in rural districts without an electric connection. Then, original pictures have been taken in the Province of Ontario so as to accurately portray Ontario conditions and possibilities. These pictures deal with a large variety of agricultural subjects—horse, cattle and swine breeding, handling of wool, orcharding, vegetable growing, seed production, and various other matters, as well as films on the conservation of food so necessary at this time. These have already been shown at a number of large exhibitions as well as at rural centres, and have attracted great interest. The work is of course as yet in its initial stages, but seems to possess large possibilities of usefulness.

PUBLICITY

It is of course recognized that the Department can only be of assistance to the farmers in the measure that the farmers take advantage of the services of the Department. In order that this might be realized to the fullest possible extent, it was decided to adopt a more extensive policy of publicity than previously. Various means were adopted not only to bring the work of the Department to the attention of the farmers, but also to place before the farmers information which might be of practical use to them, and place it in such a way as to attract their attention. The columns of the daily and weekly papers were utilized to a very large extent and a generous amount of space was also used in the agricultural papers as well. The results of this extensive publicity have been very beneficial, and the demands being made upon the Department for assistance of every nature is proof of this fact. There has been a most marked increase during the past year in the calls made upon

the Department in practically every branch and the Department is anxious to respond to these calls to the fullest possible extent, not only in the interests of the individual enquirers, but, also, because of the greater production which may thus be brought about.

FEDERAL GRANT

As in previous years the moneys due this Province, under the Federal Agricultural Instruction Act, were received and their expenditure has been of great value in extending the demonstration and instruction work of the Department. The following gives the statement of the agreement entered into with the Federal Minister for the expenditure for the current year:

Agricultural Colleges and Schools.

1. Ontario Agricultural College:		
(*a*) Buildings, equipment and furnishings	$75,000 00	
(*b*) Salaries and expenses, additions to staff, maintenance	15,000 00	
		$90,000 00
2. Agricultural School: Capital expenditure, including land purchase, buildings and equipment, and the services and expenses pertaining thereto		50,000 00

Instruction and Demonstration.

3. District Representatives, including clerical and other assistance in connection with the administration	120,000 00
4. Co-operation and markets, educational work in connection with the marketing of farm products, including organization of co-operative societies	4,500 00
5. Demonstration and instruction in vegetable growing	6,000 00
6. Stock and Seed Judging, Short Courses and Institute Lectures	2,500 00
7. Women's Institute Work, including courses in cooking, sewing, etc.	7,500 00
8. Short Courses for Fall Fair, Field Crop and Poultry Judges, including travelling and living expenses	4,703 26
9. O.A.C. Short Courses for winners of Acre Profit and Live Stock Competitions, including travelling and living expenses	3,000 00
10. Lectures on Horticulture	800 00
11. Demonstrations with vegetables and hardy fruits in New Ontario	1,000 00
12. Vineland Horticultural Experiment Station—experimental work	2,500 00
13. Drainage Work	6,500 00
14. Demonstration work on soils	4,500 00
15. Beekeeping	800 00
16. Instruction and special educational work in growing and handling corn	2,000 00

Elementary Agricultural Education.

17. To provide for and to encourage the teaching of agriculture, manual training as applied to work on the farm, and domestic science in High, Public, Separate and Continuation Schools and in Universities, to be available for grants, services, expenses and equipment, and travelling and living expenses of teachers, inspectors and others in attendance at Short Courses or other educational gatherings, and to be paid out on the recommendation of the Department of Education	30,000 00
Total	$336,303 26

KEMPTVILLE SCHOOL

Aside from the work carried on in the various Branches reviewed elsewhere, reference may be made here to the further provision made in this grant for the Agricultural School at Kemptville. It will be recalled that the decision was

reached a year ago to erect a school for the benefit of the Eastern Ontario counties, but it was also felt that the work should not be completed until the conclusion of the war owing to the desire to compete as little as possible with either the military or production needs of the Province. During the year, however, several steps of importance have been taken with a view to getting the work properly established. A principal has been appointed to supervise the work and conduct Short Courses and such other educational work as may be found practicable. Improvements were made in the farm stock and also in the farm buildings, and a contract was let for the erection of a building to be used as a live stock judging pavilion. This it is expected will be completed next year, but will be the only important building undertaken during the war. It is felt that it will serve a useful purpose in providing accommodation for the Short Courses and other educational work which it may be necessary to carry on pending the completion of the larger plan.

ONTARIO AGRICULTURAL COLLEGE

Notwithstanding the war, the College continues to attract a large number of students and to do very effective work both in the class-rooms and the experimental branches. The enrolment of first year students this fall showed a considerable increase over a year ago, being mainly composed of young men under age or otherwise unfitted for military service. The enrolment in other classes, as might be expected, was smaller, but the attendance at Short Courses was very satisfactory. The following summary may be of interest:

(Figures for general course include students of winter term and new students who entered the fall term.)

General Course	287	
Specialists in General Course Work	4	
Manual Training (One Year Normal Course)	10	
Dairy Courses	76	
Stock and Seed Judging	189	
Poultry Raising	25	
Fruit Growing	16	
Apiculture	50	
Drainage	18	
		675
Domestic Science (at Macdonald Institute)		360
Summer Courses:		
High School, first year, 10; second year, 15	25	
Public School teachers, first year	153	
Public School teachers, second year	89	
School for Rural Leadership	120	
Farm Mechanics	11	
		398
Total		1,433

ANALYSIS OF COLLEGE ROLL (GENERAL COURSE), 1917.

From Ontario.

Brant	4	Huron	1	Perth	6
Bruce	2	Kent	2	Prescott	2
Carleton	23	Lambton	9	Prince Edward	3
Dufferin	1	Lanark	4	Rainy River	1
Dundas	4	Leeds	5	Renfrew	3
Durham	5	Lennox & Addington.	2	Russell	4
Elgin	5	Lincoln	4	Simcoe	4
Essex	7	Middlesex	18	Stormont	1
Frontenac	5	Muskoka	3	Thunder Bay	2
Glengarry	5	Nipissing	1	Victoria	1
Grenville	4	Norfolk	3	Waterloo	8
Grey	3	Northumberland	1	Welland	4
Haldimand	4	Ontario	6	Wellington	17
Halton	1	Oxford	10	Wentworth	9
Hastings	5	Parry Sound	1	York	29
Leeds	5	Peel	3		

Total from Ontario. 245

From Other Provinces of the Dominion.

Alberta	2	Nova Scotia	4	Total from other Provinces	22
British Columbia	9	Prince Edward Island	4		
New Brunswick	2	Saskatchewan	1		

From Other Countries.

Argentine Rep.	1	Scotland	1	Total from other Countries	20
B. W. I.	1	U. S. A.	12		
England	3	U. S. of Columbia	2		

Ages and Religious Denominations.

The limits of age in the General Course, 1917, ranged from 17 to 45 years. The average age was 22.

Anglican	55	Friends	5	No Religion	3
Baptist	17	Lutheran	3	Presbyterian	102
Congregational	4	Mennonite	1	Roman Catholic	6
Disciples of Christ	1	Methodist	90		

GOOD SALE OF LIVE STOCK

As will be seen by the following figures, a very successful sale of the surplus stock of the College was held in the fall. Exceptionally good prices were paid, including $1.100 for a yearling Shorthorn heifer. $600 for a three-year-old Shorthorn cow. $525 for a milking Shorthorn cow, and $475 for a seven months old milking Shorthorn heifer calf. The different classes of live stock sold as follows:

6	Shorthorn bull calves averaged	$322 50
3	Shorthorn females averaged	688 70
3	Dairy Shorthorn bull calves averaged	140 00
2	Dairy Shorthorn females averaged	500 00
8	Holstein females (4 cows and 4 calves) averaged	169 60
3	Holstein bull calves averaged	143 30
2	Ayrshire heifers averaged	152 50
4	Ayrshire bull calves averaged	55 60
3	Jersey bull calves averaged	77 00
2	Yearling steers averaged	244 65
19	Twelve months' Yorkshire sows averaged	73 95 (bred)
10	Six months' Yorkshire sows averaged	37 50 not bred)

The total receipts from the sale were $10,251.00.

DAIRY COW MAKES A RECORD

The outstanding performance in a good year's record of the dairy herd was the making of a new Canadian record for a four-year-old Holstein cow by Molly Rue Rattler. This heifer and her dams for four generations were bred at the College, and the record was made on twice-a-day milking for nine months of the year. Several other individuals made splendid showings, while the record of the entire herd, as will be seen on an adjoining page, is a most creditable one.

INTRODUCING NEW VARIETIES OF GRAIN

In the important work of the Professor of Field Husbandry the introduction of new varieties of wheat has been an outstanding feature. War conditions have made necessary the encouragement of both fall and winter wheat in Ontario and this has been done by extensive publicity.

In the experimental work an effort has been made to produce better varieties. Crosses have been made between Dawson's Golden Chaff and varieties of high bread quality. In the average tests of five years crosses between Dawson's Golden Chaff and Tasmania Red, Turkey Red and Bulgarian have each surpassed in average yield the highest yielder of all the named varieties.

Following the results of the experimental plots, a variety named O.A.C. 104, being a cross between Dawson's Golden Chaff and Bulgarian, was distributed for co-operative experiments over the Province for the first time in the fall of 1916. The results received of the returns in the past season show it to be the most popular

with the experimenters of the five varieties tested. It is vigorous in growth and of good bread making qualities. Whether it will duplicate the success of O.A.C. 21 barley and O.A.C. 72 oats of course remains to be seen. Just what such a success would mean may be judged from the story of O.A.C. 72 oats as noted by the Professor of Field Husbandry:

The O.A.C. No. 72 variety of oats was started at the Ontario Agricultural College from a single seed in 1904. It was carefully tested with numerous varieties, selections and hybrids until 1911, when it was introduced over Ontario in pound lots for co-operative tests through the medium of the Ontario Agricultural and Experimental Union. It did exceptionally well on many farms and the experimenters rapidly increased the seed. It appears to be displacing many of the old varieties of oats and even the Banner, which had for many years been the most

A partial view of the experimental grounds at the Ontario Agricultural College, showing plots of wheat, etc.

extensively grown variety in the Province. Fields of the O.A.C. No. 72 variety of oats were soon entered in competition with other fields through the Field Crop Competitions conducted under the auspices of the Agricultural Societies. The O.A.C. No. 72 and the Banner varieties have each taken first prizes in the Ontario Field Crop Competitions as follows:

Year.	Banner.	O.A.C. No. 72
1913	41	1
1914	34	20
1915	33	48
1916	26	76

At the Provincial Winter Fair entries have been made of the O.A.C. No. 72 oats in each of the past four years as follows:

Year	Number
1913	5
1914	36
1915	37
1916	71

In 1916 there were more entries for this oat than for all other varieties combined and more than three times as many as those for the Banner. This popular oat is having a marked influence in increasing production and it is worth millions of dollars to Ontario annually.

DRAINAGE WORK CONTINUED

The drainage work, like so many other things, was affected by the labor shortage, but notwithstanding this a great deal of effective work was done. The number of applications was up to the average, but scarcity of competent surveyors prevented all requests being complied with. Furthermore, an effort was made to comply only with requests where farmers were in a position to proceed at once with the laying of tile. The plan of holding demonstrations was discontinued, but two successful Short Courses were held. The following table tells the comparative story:

SUMMARY OF SURVEYS

Year	Applications	Surveys	Held Over	Acres Surveyed	Miles of Drain
1906	15	15	.....	500	45
1907	126	70	56	3,500	350
1908	166	100	66	5,000	510
1909	302	179	121	5,157	613
1910	518	383	135	14,672	1,800
1911	414	327	87	15,211	1,864
1912	430	293	137	17,212	2,278
1913	290	247	43	13,705	1,713
1914	296	250	46	13,386	1.673
1915	291	263	28	15,336	1,917
1916	367	318	49	14,694	1,731
1917	343	255	88	11,988	1,489
Totals	.....	2,700	.....	130,361	15,963

Reports have been received from 13 of the 28 drainage demonstration plots started in previous years. Six of these were under oats, 5 under hay and 2 under wheat, but on one of these the midge damaged the crop so that the report cannot be used as there is no indication whether the midge was worse on the drained or undrained. From the following table it will be seen that on the plots in hay the average increase due to drainage was $4.95, practically $5.00 per acre:

Owner	Address	Soil	Crop	Yield per Acre		Increase	Value of increase per acre
				Undrained	Drained		
J. S. Switzer	Glanford	Clay loam	Hay	1 ton	1.5 ton	.5 ton	$5.50
S. W. Lloyd	Belleville	" "	"	1 "	1.25 "	.25 "	2.75
L. Kerr	Harrowsmith	" "	"	1 "	1.5 "	.5 "	5.50
B. Matchett	Stewart's Hall	" "	"	1 "	1.5 "	.5 "	5.50
R. L. Jamieson	Renfrew	Clay	"	1 "	1.5 "	.5 "	5.50
M. Barr	Beachburg	"	Oats	35 bus.	50 bus.	15 bus.	9.00
N. McDougald	Tara	"	"	20 "	75 "	55 "	33.00
A. J. Galbraith	Hornby	Heavy clay	"	35 "	38 "	3 "	1.80
W. D. McLeod	McCrimmon	Loam	"	23 "	25 "	2 "	1.20
John McQueen	Arthur	"	"	25 "	40 "	15 "	9.00
M. Jordan	Parker	"	"	32 "	38 "	6 "	3.60
D. Climenhauge	Stevensville	Clay	Wheat	32 "	36 "	4 "	8.80
C. J. Zavitz	Marshville	Loam	"	15 "	15 "	Midge damag'd grain	

On those plots in oats the average increase was $9.60 per acre, not counting any difference in straw. Reports in other years have shown an average difference of from ⅓ to ½ a ton per acre, which at $6 per ton would be worth $2 to $3, say $2.50 on the average, which added to the $9.60 for grain would make a total of $12.10, or practically $12.00 per acre. It should be borne in mind that these results were obtained on plots most of which were giving fair returns before being drained.

GARDEN AND ROOT SEEDS

To assist in relieving the shortage of garden and root seeds, which before the war came almost entirely from Europe, the trained men and equipment of the College have been brought into service. Each year since the war began the shortage has become more acute and the need for providing home supplies more imperative. This work has been carried on in co-operation with the Dominion Seed Commissioner, who has directed the work of this nature throughout all the Provinces. A beginning had been made before the outbreak of the war and so conditions were favorable for an extension.

The Horticultural Department has undertaken to grow seed of celery, cabbage, carrots, beets and onions, and, according to the Seed Commissioner, has made better progress than has been made elsewhere in Canada. The seed produced has been what is known technically as "stock seed," which is used not for commercial crop production, but for future seed growing. Some of the seed will be placed elsewhere for increase, while a portion will be retained to be developed under the supervision of the College officers.

Even before the war shut off the supply of mangel seed usually imported from Europe, experiments had been carried on on the College plots by the Field Husbandry Department in the production of home grown seed, and in almost every year better results were obtained from the home grown seed than from that imported from Europe. In 1916 weather conditions ruined the crop, but in 1917 about 1,700 pounds of good seed of a specially selected strain of Yellow Leviathan were produced from an acre of land.

RESULTS IN POULTRY FEEDING

Commercially the year has been a trying one for the poultry industry because of the high price and scarcity of feeds without a correspondingly high price for poultry products. The experience of the Poultry Department has been that a good laying hen has shown more profit than heretofore, but the average hen little if any profit. To pay for her feed it was necessary that a hen should lay one dozen more eggs than the number which would serve the same purpose before the war.

In spite of the difficulties of labor and the supply of materials, the experimental work of the Poultry Department has been maintained and the Professor of Poultry Husbandry notes some interesting conclusions in regard to egg production from laying strains such as Barred Plymouth Rocks.

Other than the pedigree or parentage the hens' egg production is affected by the season of hatching, feeds, housing, etc, and the attendant. Considerable attention has been given to these problems and a few remarks in general might not be out of place.

To test the values of different feeds as they may affect egg production our results to date would indicate that where the number of individuals used in each feed test is less than three hundred, the results must be used with considerable discretion. This simply means that the variation in the egg producing power of

full sisters is frequently very great and that at least three hundred birds are required to indicate the value of the food for egg production.

The influence upon egg production due to improper brooding, feeding, housing or range may be so great that all the care exercised in breeding is entirely lost; or in other words because a chick comes from high producing parents, it may not be a good bird or a good producer, due entirely to bad management or the attendant.

The time of year the chicken is hatched appears to influence egg production, especially during the winter months. The breeding work has now proceeded far enough to say that there are good laying families of the same breed which will vary in time of maturity on the average as much as thirty days, which means that in order to have a pullet begin laying November 1st, one family requires to be hatched one month earlier than the other. There also appears to be some sympathy between size and time of maturity, or the larger specimens are slower to mature. The best time of the year to hatch the families of Barred Plymouth Rocks that we are breeding has been from about March 26th to May 5th. Hatched earlier than this they are inclined to moult during November and December, and hatched later they do not become sufficiently matured to lay well during the winter. Where the birds have an ideal range and are few in number, they would mature faster, particularly if extra well fed. The strains of White Leghorns we are breeding when hatched between April 1st and May 10th do very well.

The average production of eggs from the pullets hatched in 1916 was higher than that of 1915. There were higher producers among the 1915 birds, one bird laying 310 eggs, whereas the best this year from one bird was 278 eggs. It is not to be expected that a producer of 300 or more eggs will be bred every year, and, moreover, to get such performances requires a feeder of some experience and intuition. If the general average of the entire flock can be maintained, or slightly increased, it is perhaps all that can be expected during the period of the war.

Below is given the numbers and eggs produced from pullets hatched during March, April and May of 1916. The pullets hatched in March were put in laying pens on September 1st; the April pullets, October 1st; and the May pullets on November 1st, 1916. Records were kept for the year following:

160 March hatched Barred Rock pullets averaged 165.1 eggs each.
120 April hatched Barred Rock pullets averaged 167.22 eggs each.
90 May hatched Barred Rock pullets averaged 143.56 eggs each.

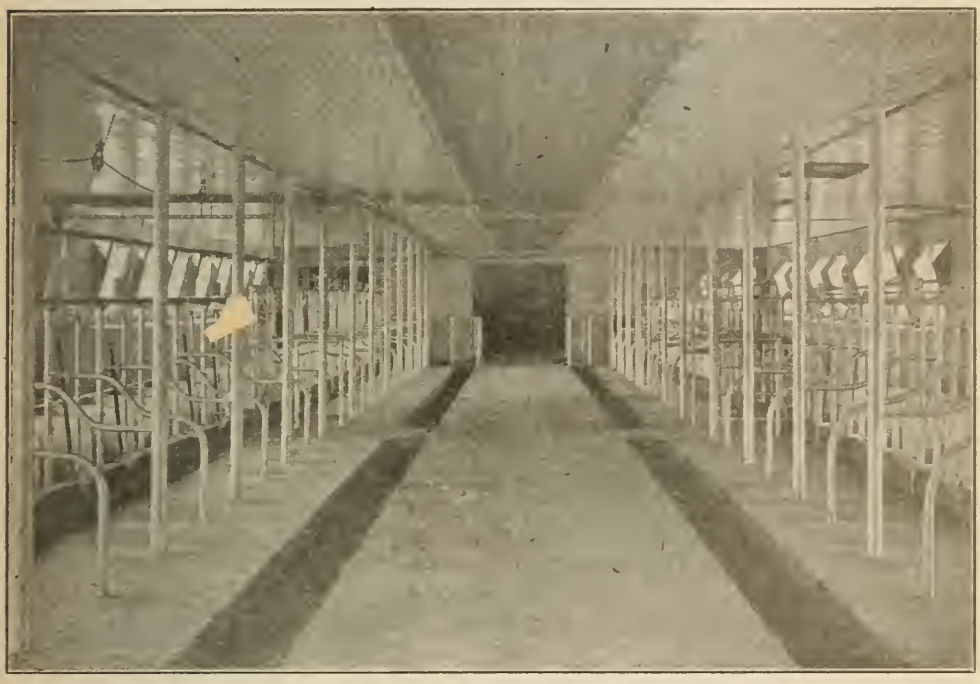
The average production from the 370 birds was 161.1 eggs each.

During the year there were over 30,000 eggs from pure-bred stock produced and shipped from the department for hatching purposes. There were also shipped about 500 pure-bred cockerels for breeding purposes.

HIGH TESTING MILK WORTH MORE

Having in mind the recent discussion as to the desirability of paying for milk at cheese factories on a quality basis, an experiment was carried on in the Dairy Department making a comparison. The lots of milk marked "high" averaged 3.8 per cent. fat and 2.25 per cent. casein; the lots marked "low" averaged 3.25 per cent. fat and 2.1 per cent. casein. The pounds of cheese per 1,000 lbs. milk averaged 93.58 from the "high" lots and 83.51 from the "low" lots, a difference of 10.07 pounds of cheese in favor of the higher testing milk, which at the prevailing price paid for cheese during the past season would be about two dollars more cheese value per 1,000 lbs. of milk for the high test lots, or twenty cents per 100 lbs. of milk. The pounds of cheese made per pound of fat in the milk averaged 2.46

for the "high" lots and 2.56 for the "low" lots. The percentages of fat and moisture in the cheese were 36.85 and 35.3 respectively for the "high" lots, and 35.1 and 36.2 for the "low" lots. The percentage of shrinkage during one month was 2.88 for the high and 4.74 for the "low" lots. The average score of the cheese was the same for both lots.



Interior Ontario Agricultural College Dairy Stable.

WHEAT MIDGE COMES BACK

Reports received by the Entomological Department indicate that destructive insects were not as numerous during the past year as usual. Even the commoner species such as plant lice, cut worms, white grubs and wire worms were complained of comparatively seldom. This is attributed to the severity of the previous winter and the lateness of the spring. The attention of the department, however, was called to the re-appearance of the wheat midge. It was reported from Elgin, Wentworth, Lincoln and Welland Counties, but fortunately did not do any great damage. It is fifty years or more since this insect caused great damage among wheat growers of the Province. To prevent a recurrence of this if at all possible, information was promptly distributed as to the nature and treatment, and the following may be quoted: The parent fly is a very small, two-winged insect, about an eighth of an inch in length, with a yellow or orange colored body. It lays its eggs, when the ears are formed on the growing grain, at the tip of the chaff covering the soft kernel. In about a week there hatch from these eggs small dark red maggots which enter the grain and feed on its milky contents, leaving only a shrivelled husk. When full grown the maggot descends to the ground and buries itself a few inches below the surface; soon after it changes to the pupal stage and remains torpid during the winter. It is evident that nothing can be done to destroy the maggot when feeding in the ear, it remains, therefore, to guard against future attacks. For this purpose it is most important to sweep up and burn at

once all chaff and refuse from the threshing machine, which will contain many of the insects. If practicable, the stubble in the field should be burned over, and in any case the field should be deeply ploughed in order to bury the wintering puparia so deeply that the flies will be unable to emerge next year. Rolling the ground after ploughing will help materially to produce this result. No wheat should be grown on the same field or very near it for one or two seasons.

BACTERIZED PEAT THEORY EXPLODED

A couple of years ago it will be recalled sensational announcements were made as to the results obtained by an English experimenter in the use of bacterized peat as a fertilizer. It was suggested that agriculture was about to be revolutionized. The matter was immediately taken up in the Bacteriological Department and a test made in 1916 in the growing of radishes. This test was far from satisfactory, but was regarded as inconclusive. It was followed in 1917 by tests in the growing of lettuce. It was found that growth is influenced slightly possibly in the hastening of the ripening process, but the final conclusion is reached that the returns are not commensurate with the cost of treatment. It may be added that similar adverse results have been obtained from experiments conducted on the subject at Rothamsted Station in England.

WHEAT CROP GRADING HIGH

The Chemistry Department has been testing samples of the 1917 wheat crop and has found it to grade high both as to the Ontario crop and the Western crop. The Western crop is also a free milling crop, so much so that the flour mills are able to turn out a great deal more flour per day than the year before. Tests have also been made in the use of flour from rye, barley, oats, buckwheat and corn in combination with wheat flour, and it was found that as much as 25 per cent. rye, barley and buckwheat could be used without seriously affecting the appearance of the loaf. Where 25 per cent. of oat flour was used the size of the loaf was considerably decreased. The department feels that even if substitution is not adopted in the large bakeries, it might be followed to advantage in home baking.

STUDYING SOIL NEEDS

The soil survey which has been made under the direction of the Professor of Chemistry has been extended to Eastern Ontario as far as Kingston. It has been found that, in the main, west of the escarpment in the neighborhood of Milton the soil is derived largely from limestone and lies over limestone. East of the escarpment and extending as far as Bowmanville the soil is derived from and lies over sandstones and shales. This soil is naturally more deficient in lime and its application is consequently of fundamental importance. From Bowmanville to Belleville the soil is similar to that west of the escarpment, excepting that it is more largely of the lighter classes. The soil of the area between Belleville and Kingston is very shallow. It overlies limestone and in this respect is similar to that of Western Ontario; but it is so shallow that it presents entirely different cultural problems. Immediately east of this area, that is, east of Kingston, the soil lies over precambrian rock, which is lacking in lime and consequently has a tendency to become sour.

Along with the soil survey, experiments have been carried on in the application of different kinds of fertilizer to soil needs. As to this phase of the work the Professor of Chemistry says: Demonstration plots on the College farm gave some excellent results this year. For instance, the increased yield of mangels on plots treated with fertilizers was from 75 to 90 per cent. greater than on the manured but not fertilized check plots. Phosphates are particularly needed by this type of soil. Preliminary and as adjuncts to the demonstration plots we have placed a

few experiments with lime and phosphates. These are apparently the two mineral constituents most needed by our soils. The lime experiments laid down in the neighborhood of Leamington, Welland and Milton have again clearly shown the necessity of adding lime to these soils. It wonderfully improves the physical state of the soil and increases the yield. Lime was applied on these plots at the rate of from one to ten tons per acre and ground limestone from two to twenty tons per acre. It is our intention to note the effect of these applications over a number of years.

The phosphate experiments have been placed in the neighborhood of Milton and Seaforth. The soil in these centres we know needs phosphate and we have placed several experiments with the object of getting some information regarding the best form of phosphate to use. The effect of the application will be watched over a term of years. It is worthy of note that at Seaforth phosphate alone increased the yield of turnips as much as 33 per cent. The cost of the phosphate was $5.00 per acre and the value of the increased yield was $50. This shows something of the possibilities of the work that may be accomplished in demonstrating the effect of phosphate on this type of soil—and it covers a large area. Other types have their special characteristics and we hope to reach these as time permits. It is our intention to follow these preliminary experiments with the more permanent demonstration plots, when we will be able to work out in more detail the problems characteristic of the soil. At the present time when increased crop production is so important the right use of these costly fertilizers is important. Potash is practically unprocurable, and imported forms of nitrogen are very expensive, and so we are forced back to the use of phosphatic fertilizers and organic forms of nitrogen such as are got from the packing houses. In many ways I do not consider this any great hardship.

COST OF PRODUCING BABY BEEF

The first results of an experiment in the production of baby beef begun by the Animal Husbandry Department in 1915 were completed on the sale of the first crop of calves. The five calves used in the experiment were from good grade Shorthorns and sires of varying quality. Three were raised on their dams and two on the pail, and the cow's rations consisted largely of hay, silage, some roots and very little grain except immediately after calving. The conditions therefore approached those of an average farm and the following table gives the story in detail:

Name of Cow	Prettie	Barber	*MacCannell	*Hales	*White	Totals
Date Calved	Feb. 19, 1916	Dec. 15, 1915	Feb. 5, 1916	Nov. 29, 1915	Dec. 31, 1915	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Cost of cow	87 31	120 86	95 70	84 16	106 81	494 84
Interest	6 81	6 04	5 54	4 56	8 01	30 96
Feed of cows	59 29	37 67	47 26	41 49	58 41	244 12
Stabling cow and calf	6 75	5 25	6 25	5 75	7 00	31 00
Feed of calf	58 21	63 99	39 68	38 26	35 87	236 01
Total cost	131 06	112 95	98 73	90 06	109 29	542 09
Manure of cow and calf	26 50	19 25	22 40	20 50	25 75	114 40
Milk produced	86 90	45 44	.....	4 50	.....	136 84
Net cost of calf	17 66	48 26	76 33	65 06	83 54	290 85
Weight of calf when sold	760 lbs.	910 lbs.	910 lbs.	790 lbs.	710 lbs.	4,080lbs.
Price received	$76 00	$91 00	$91 00	$79 00	$71 00	$408 00
Profit on calf	58 34	42 74	14 67	13 94	—12 54	117 15

NOTE.—All calves were sold March 17th, 1917.

Cows marked thus (*) nursed their calves.

NOTE.—The White cow failed to breed again and the extra cost of her feed until she was sold contributed somewhat to the poor showing of her calf. This condition frequently arises in all herds, so is not at all an unusual extra expense.

Summary.

Sale price of calves		$408 00
Total cost cows and calves for year	$542 09	
Loss on sale of White cow	21 81	
	$563 90	
Credits for milk and manure	251 24	
Net cost of calves		312 66
Surplus to pay labor on cows and calves		$95 34

As the labor actually cost $200 there was no profit figured on this basis. The experiments will be continued over a period of five years and subsequent calves because of the use of a better sire are more promising.

GETTING RID OF WEEDS

For the past six years the Professor of Botany has been directing experiments on over sixty farms with a view of ascertaining the best methods of destroying the most troublesome weeds. As a result, the following are reported as being methods which can be successfully employed to destroy the weeds mentioned:—

The Use of Rape in the Destruction of Perennial Sow Thistle and Twitch Grass. Cultivate the field until about the middle of June, running over it frequently with the cultivator so as to keep the tops down and thus weaken the "roots." Then apply manure at the rate of about twenty tons per acre (twelve good loads). Cultivate the manure in thoroughly, and with a double mould board plow slightly ridge up the land, making the ridges about twenty-six inches apart. On the ridges sow pasture rape at the rate of one and a half pounds per acre. It is important that the right amount of rape should be sown for if too little is sown the stand will not be thick enough to smother the weeds, and if on the other hand too much is sown the plants will be too crowded and not grow vigorously enough to keep ahead of the thistle or Twitch Grass. Sow the rape when the land is sufficiently moist to insure quick germination of the seed. If the rape is slow in starting, the Sow Thistle or Twitch Grass may get a start in the row and thus necessitate hand cultivation there. Cultivate the rape every week or ten days until it occupies all the ground and makes further cultivation impossible. If, when the rape is cut or pastured, any Sow Thistle or Twitch Grass remains, the field should be ridged up the last thing in the fall and put in with a hoed crop the following year. This should not be necessary if a good stand of rape is secured.

A Method of Cultivation for the Eradication of Bladder Campion or Cow Bell. Badly infested fields should be plowed deeply and then thoroughly cultivated and cross-cultivated with a broad-shared cultivator in order to break up and weaken the underground root stocks. This cultivation should be given frequently enough to prevent the plants making any growth above ground until it is time to put in a hoed crop, which must be kept thoroughly clean in order to be effective. A well cared for crop of corn has been found to give excellent results. Special attention must be given to hoeing out any patches of Bladder Campion which may appear in the corn crop, and which are not destroyed by cultivation. If in the fall there is any Bladder Campion in the field, it will be necessary to plow fairly deeply and cultivate thoroughly and the following spring repeat the frequent cultivation until it is time to put in a hoed crop. This

second hoed crop should not be necessary under ordinary conditions. One spring's thorough cultivation followed by a well-cared for hoed crop should destroy practically all the Bladder Campion.

Spraying with Iron Sulphate to Destroy Mustard in Cereal Crops. Iron Sulphate or copper can be successfully used to destroy Mustard in standing grain without injury to the crop. A twenty per cent. solution should be applied. This can be prepared by dissolving eighty pounds of Iron Sulphate in forty gallons of water. Iron Sulphate is dissolved quite readily in cold water. The solution should be strained through a cheesecloth as it is put into the spray pump tank. This will remove dirt and small particles that are apt to clog the nozzles. Apply on a calm, clear day just as soon as the first few plants in the field show flowers. *It is very important to spray early.* If the plants are left too long the treatment is not nearly so effective. If a heavy rain comes within twenty-four hours after the solution is applied, it will be necessary to spray again. An ordinary hand pump barrel sprayer such as is employed to spray fruit trees may be used or a potato sprayer can be rigged up to do the work. Many of the up-to-date potato sprayers have a special broadcast attachment for spraying weeds. These are excellent for large areas as they cover a wide strip at each round. Care must be taken to see that every mustard plant is covered with the solution in the form of fine spray.

ONTARIO VETERINARY COLLEGE

The number of students in attendance from the 1st of November, 1916, to the 31st of October, 1917, was 142. They registered here from the Dominion of Canada, United States, as well as some other countries in the order named. The hostilities in Europe and the consequences of the war evidently keep the class roll at a lower figure than usual. From the College, including graduates, undergraduates and faculty, some 200 men have gone to the front according to reports received by the Principal.

With the opening of the College on the 1st of October most important changes in the Course were introduced and for the purpose of sending out better trained men another year was added to the curriculum, which made it possible to introduce new subjects such as Veterinary Economics, Physics and Military Training, as well as to lengthen the periods for teaching many important subjects which are already in the three-year curriculum.

Prof. Septimus Sisson, recently of the University of Ohio, has been appointed to take charge of the course in Anatomy and the work is progressing favorably.

The military training, which will be under the supervision of an officer detailed from the army, will in future have the College for its headquarters, and the units forming the Veterinary Corps will be part of the Canadian Officers' Training Corps, and uniforms for the men will be provided by that organization.

On the 25th of April, 1917, 44 students graduated from the College with the degree of Veterinary Surgeon (V.S.) and 50 per cent. of them are now on active service. Subsequently eight of them received the degree of Bachelor of Veterinary Science (B.V. Sc.) from the University of Toronto, five of whom are also on active service.

The method of teaching at the College has not differed materially from former years except with new equipment and familiarity with the work it may be said to have been better than ever before.

It seems that the course offered by the Ontario Veterinary College is attractive to returned soldiers as already three of them are in the first year class and the training may be very useful for other returned soldiers as a means of making a good livelihood in the future.

BUREAU OF INDUSTRIES

The value of the publications, especially of bulletins, has been further attested by the continued requests for information. To meet this demand a large supply of most timely bulletins, in simple, concrete form, has been issued. The following figures show the work in that connection:—

*188. Weeds of Ontario	30,000
*231. Vegetable Growing	25,000
*238. Lime and its Uses	15,000
242 Diseased Mouths, a cause of illhealth	60,000
243. Stories in Agriculture	30,000
244. Hints for Settlers in Northern Ontario	20,000
245. Food Values	60,000
246. Suggestions on Feeding Stock	40,000
247. Farm Poultry	20,000
248. Pruning Fruit Trees	12,000
249. Pears	12,000
250. Insects Attacking Fruit Trees	30,000
251. Insects Attacking Vegetables	30,000
252. The Preservation of Food; Home Canning	100,000
253. Dairy Cattle	50,000
254. War Breads	75,000
255. Tuberculosis in Poultry	12,000
256. Wintering of Bees	20,000
	641,000

The following crop bulletins have been printed for distribution:—

129. Crop Bulletin, November, 1916	18,000
130. Crop Bulletin, April, 1917	7,500
131. Crop Bulletin, May, 1917	7,500
132. Crop Bulletin, August, 1917	7,500

The distribution of the Annual Reports has been continued and the following are the figures of the numbers printed for distribution:—

Minister's Report	25,000
The Ontario Agricultural College	25,000
The Experimental Union	25,000
Agricultural Societies and Feld Crop Competitions	21,000
Horticultural Societies	18,000
Vegetable Growers' Association	5,000
Live Stock Branch	26,000
Stallion Enrolment Board	5,000
Women's Institutes, 1 and 2	39,000
Dairymen's Associations	25,000
Entomological Society	3,500
Fruit Growers' Association	4,000
Beekeepers' Association	4,000
Bureau of Industries (Agricultural Statistics)	8,000
Monteith Demonstration Farm	10,000
Corn Growers' Association	6,000
Vineland Horticultural Experiment Station	5,000
	254,500

To assist the campaign for increased production, the following special pamphlets were printed and distributed:—

Egg Production	40,000
Backyard Gardening	75,000
Bacon Conference	25,000

AGRICULTURAL AND HORTICULTURAL SOCIETIES BRANCH

Agricultural Societies, the oldest and largest organization of farmers in Canada, were established in one of the Provinces down by the sea upwards of one hundred and fifty years ago, and a quarter of a century later the first agricultural society in Ontario was established with less than a score of members. The attendance at that first exhibition was 35; in 1917 one million eight hundred thousand persons passed through the gates of societies which received grants from the Ontario Government.

Short courses for Departmental Judges were held at Guelph and Ottawa, and as a result the judges are adopting a more uniform system of placing awards and the complaints registered with the Superintendent of Agricultural Societies are becoming fewer each year.

FIELD CROP COMPETITIONS

These competitions held under the auspices of Agricultural Societies and inaugurated ten years ago are continuing to meet with the approval and interest of farmers. Here it may be noted the manner in which this educational work has been taken up by the farmers. At their inception the grant made by the Government was $1,000 and 300 farmers entered the competition. In 1917 the

One view of the exhibit of the Department at the Canadian National Exhibition.

grant for this work was $25,000 and over 7,000 farmers entered. Several thousand copies of the Appendix to the Agricultural Societies Report containing the names, addresses, names of varieties and the scores of the competitors and prize winners are distributed throughout the Province, and advantage is being taken of the information therein contained and the result has been the distribution of thousands of bushels of the best seed in large quantities ever produced in Canada. During

the earlier years in which these competitions were held many noxious weeds were in the exhibits of grain, especially wild oats and perennial sow thistle. In 1917 the grain exhibits were absolutely free from these serious handicaps to clean farming.

HORTICULTURAL SOCIETIES

Previous to 1907 Agricultural and Horticultural Societies worked under the one organization and received their grants from the same appropriation. After that date they became separate and distinct institutions. In the above year the roll of the Horticultural Societies showed a membership of several hundred. In the year which has just closed the membership roll contains a paid membership of 18,000 and each year applications are received for the organization of many new branches. In 1917 *The Horticultural Societies Act* was amended to include Township Societies, and advantage is being taken of this widening of the field of endeavor.

This organization has also done much for the encouragement of increased production. Thousands of school gardens have proved an encouragement to the boys and girls of Ontario, and the vacant lot and backyard gardening propaganda inaugurated by these societies has been a marked success. In ever city, town and village where these societies have been organized the interest taken in gardening has been marked and the results gratifying to all concerned.

ONTARIO VEGETABLE GROWERS' ASSOCIATION

"Increased production" has been the motto of this Association since August, 1914, and more interest than ever before is being taken in the garden and crop competitions conducted by this Association, notwithstanding the fact that many of the sons of the members have enlisted. Four crops were taken up in these competitions for vegetable growers, onions, tomatoes, celery and early potatoes, and the prize winners were allowed to compete at the Canadian National, Central Canada and Western Fairs, where large prizes were offered by these institutions. The exhibits this year were of a high order. The membership is composed of earnest, energetic men who are all experts as market gardeners.

Automobiles "parked" at provincial plowing match.

ONTARIO PLOWMEN'S ASSOCIATION

This association receives a grant from the Ontario Government. Its work is educational and its chief aim is better cultivation of the soil. Prizes are offered in the competitions conducted by the local branches and from these come the plowmen who take part in the great Provincial match held in October at some point selected by the Executive of the Central Association. This year's Provincial match was held at "Oak Park Stock Farm" near the City of Brantford, and 51 of the best plowmen in Ontario entered the great competition. Notwithstanding the fact that weather conditions were not favorable, over 15,000 farmers were in attendance and all were enthusiastic over the work done by the Plowmen's Association in advancing the interests of better agriculture. Over a score of farm tractors were in operation and great interest was taken in the work performed by them. Many leading manufacturers gave demonstrations of the working of other up-to-date machinery.

LIVE STOCK BRANCH

The Ontario Department of Agriculture co-operating with the Ontario Sheep Breeders' Association undertook the co-operative marketing of wool for the Province last season. This was the first time the co-operative marketing of wool was attempted in a large way, but in May and June nearly 300,000 pounds of wool were collected and graded by officials of the Dominion Live Stock Branch. The wool was sold by tender the last of June, the following prices per pound being obtained for the various grades:—

Grade.	Price per pound.
Fine Medium Combing	67c.
Medium Combing	66
Medium Clothing	67
Low Medium Combing	63⅛
Coarse Combing	57
Lustre	57
Rejects	50
Grey and Black	46
Locks and Pieces	34
Tags	26
Washed Wool	78

These prices averaged over 61 cents per pound, which was fully 10 cents per pound higher than had been paid for similar grades at local points up to that date. The results were eminently satisfactory to the growers and they proved a great stimulus to both sheep raising and co-operative selling.

STALLION ENROLMENT

The Ontario Stallion Law has now been in force for five years. The Report of the Board issued October, 1917, gives the total number of stallions enrolled for that year as 2,433, of which 1,793 were pure breds and 640 grades. This is a decrease in the number of stallions enrolled in the previous year, of 298; the greater part, however, of the decrease being in the lesser number of grades enrolled in 1917, there being only 26 per cent. grades of the total number of horses enrolled. Of the 1,793 pure breds enrolled 80 per cent. belong to the heavy draught breeds.

The law affecting sound grades comes into effect the 31st of July, 1918, so that after that date none but pure bred horses can be granted Enrolment Certificates.

The regulations have been changed for the certificates to be issued for 1918, dividing the sound pure-breds into Approved A. 1, and Passed Form I classes. The Department of Agriculture is providing premiums to be given to those horses which from their soundness, correct conformation and outstanding breed character, are considered worthy to receive such premiums. It is hoped that the premium system as instituted this present year will have a tendency to maintain a high quality of horses for service in the Province and will prove some encouragement towards the importation and keeping in the Province of the highest type of stallions.

WINTER FAIRS

The Ottawa Winter Fair of January, 1917, was very successful, as there was a record entry of live stock and poultry.

The Ontario Provincial Winter Fair held at Guelph in December, 1917, was also most successful. The prize list was increased from the former year by at least $2,000, and as a result there was paid out in prize money considerably over

$21,000. This is a record for the Show. The entries were very heavy in certain classes, there being 21 aged imported Clydesdale stallions, 16 aged Percheron stallions and 15 aged Standard-Bred stallions. The Shorthorn, Aberdeen-Angus and Hereford breeds were well represented. The entries in sheep were a record, there being 522. The pure bred entries in swine were very heavy. The Poultry Department had a record entry of something over 6,200 birds. A feature of the 1917 Winter Fair was the agricultural moving pictures given by the Bureau of Provincial Motion Pictures.

ENCOURAGEMENT OF THE SHEEP INDUSTRY

In addition to the five flocks distributed in Ontario in 1916, additional flocks to the number of twenty were distributed in the month of December, 1917. These flocks were placed in districts of the Province where sheep are not now numerous and where it is believed sheep raising can become one of the most profitable industries.

CO-OPERATIVE SHIPMENTS OF LIVE STOCK

Two years ago it will be recalled the Department made a grant for assisting in the co-operative shipments of live stock to the West which had previously been handled entirely by the Associations. Since that time the work has been extended to the mutual benefit of both Ontario and the West. The stock is collected under the direction of the Live Stock Branch, and a man is sent with carload lots to look after the distribution in the West. The following table gives a complete record of the work for a number of years past:—

Year	Horses	Cattle	Sheep	Swine	Total
1908	22	74	14	15	125
1909	25	70	84	4	183
1910	39	51	36	7	133
1911	58	51	51	18	178
1912	51	45	24	20	140
1913	47	71	107	21	246
1914	49	97	34	20	200
1915	28	104	76	8	216
1916	59	185	100	22	366
1917	70	269	196	15	550

PURE BRED SALES

For some years past the Department has given a grant for the encouragement of pure bred sales of live stock. The past few years, and particularly the past year, has witnessed a remarkable expansion in this work which is in itself a sign of the improvement of the stock in Ontario and the desire of the farmers to secure better breeding stock. To meet the situation the grants by the Department had to be increased and the basis of payment rearranged. In the present year payment is based on a rate of $3.00 per head of animals included in any co-operative sale which has previously had the approval of the Department, the maximum not to exceed $250.

POULTRY ASSOCIATIONS

Fifty local poultry associations received grants for the fiscal year 1916-1917, which shows an increase of ten over the fiscal year 1915-1916.

In June, 1917, a Convention of representatives from the various poultry associations met in the Poultry Department of the Ontario Agricultural College, Guelph, and arranged a circuit of shows, selected expert poultry judges and discussed ways and means for increased poultry production for the coming year.

HORSE SHOWS

The number of horse shows receiving assistance through the Live Stock Branch has been greatly lessened owing to the war.

In addition to the regular work of the Live Stock Branch the Director's time has been taken up to some extent with the work of the various Live Stock Associations, he being Secretary of the following Associations:—

Dominion Cattle Breeders' Association.
Canadian Sheep Breeders' Association.
Canadian Swine Breeders' Association.
Ontario Horse Breeders' Association.
Ontario Sheep Breeders' Association.
Ontario Swine Breeders' Association.
Western Ontario Poultry Association.
Ontario Large Yorkshire Swine Breeders' Society.
Ontario Berkshire Swine Breeders' Society.
Eastern Canada Live Stock Union.

INSTITUTES BRANCH

In connection with the extensive campaign "A Vegetable Garden for Every Home" carried on by the Department, this branch was asked to send instructors to the centres asking for the same. A staff of twenty-five instructors was employed, some of them for only two or three meetings, while others attended a considerable number. Altogether 180 meetings were held with an aggregate attendance of 40,379. For the most part the residents of the rural districts and the smaller towns and villages, relied solely upon the literature on vegetable gardening which the Department supplied. Keen interest was shown in the cities and larger towns, from which most of the requests for lecturers came. A representative of the Department gave illustrated lectures on "Gardening" at 41 schools in Toronto, and a number of lectures were also held in connection with various organizations and at a number of factories in Toronto, London, Hamilton, Welland, Stratford, Brampton, Orillia, Ottawa, and many other centres entered into the campaign with great enthusiasm. The following extracts from some of the reports received will be found of interest:—

An attractive garden.

Brampton—(Report by J. W. Stark, District Representative): "People are putting in gardens who never thought of gardening before. A general committee was formed and several committees were appointed to have charge of purchasing seed, supplying of land, advertising, etc. We received a grant of $175.00 from the Town Council, which was used for expenses, such as renting of hall, printing, advertising, etc., and we also paid one-half of the wholesale cost of seeds supplied. We supplied the people with 198 complete sets of garden seeds for the different sized plots. In addition to this, we gave out 75 packages of onion seed, between two and three hundred eight-pound bags of early and late potatoes and several dozen packages of sweet corn. We also took orders for full bags of potatoes and after having made a special contract with one of the local dealers, these orders were turned in for delivery. The people who received seeds had previously filled in application cards, and we ordered only for those who had applied, but when the other townspeople saw what we were giving, the office was flooded with demands for more. We supplied land free of charge to those who had none, and we were specially successful with the public school children.

Orillia: Orillia divided the town into seven districts, having a supervisor for each and under him three or four canvassers. Much enthusiasm has been shown, over 150 applications having been made to the central committee to have gardens ploughed. The School Board is co-operating and prizes are being offered for the best gardens. The town council arranged for the ploughing of gardens at 50c. per hour.

Kenora: Meetings were held at Kenora, Keewatin, Dryden and Sioux Lookout addressed by Professor J. A. Neilson, Manitoba, Agricultural College, and R. Ascough, Kenora, the latter discussing poultry raising. Arrangements were made to utilize all the vacant land in the towns, while considerable interest was shown by the people from the rural districts in the Vegetable Growing Campaign.

In Kenora, the rural school children had a competition of fifty gardens, 20 feet by 30 feet, and the Women's Institute had a competition of ten gardens besides hundreds of others who had private gardens that were intelligently cultivated.

Gananoque—(Report by W. J. Cooke, Cataraqui): "At two o'clock in High School, about one hundred were present and some fifteen school boys promised to go farming. I recommended this action as quite as patriotic as that of their elder brothers who were enlisting, and told them they would need as much courage in training their muscles to farm work as their elders could show courage facing the Huns. After the meeting, I spent over an hour answering questions by over twenty-five of the leading spirits in garden and Women's Institute work. This, I think, was a valuable session."

The Department has received many letters of appreciation for literature sent and speakers furnished. The campaign was a decided success, and while results were most gratifying in 1917, there is no doubt but that many who undertook gardening for the first time in 1917 will extend their operations and meet with much greater success in 1918.

LARGE NUMBER OF MEETINGS HELD

The number of meetings held under the direction of the Institutes Branch during 1916-17 was somewhat less than in former years, owing chiefly to labor conditions obtaining in the country. A keen interest was shown by those who did attend and there is evidence that most effective work was done in many sections.

Discussing the good points of a dairy cow at a short course.

Particular interest has been shown in the best utilization of the coarser foodstuffs on the farm and the best means of supplementing these by the purchase of concentrates. Hog production has been a subject of general interest, and many sections have shown a keener interest in winter milk production than heretofore. A summarized statement of the attendance at meetings of various kinds is given

herewith and includes statistics for Women's Institutes, the members of which in some of the rural districts have shown a keener interest than heretofore in farming operations, especially the lighter forms of agriculture, such as vegetable growing, small fruits, poultry raising, etc. The statement is as follows:—

RECORD OF ATTENDANCE.

Farmers' Institutes	51,500	
Women's Institutes	231,000	
Better Farming Special	39,890	
		322,390
Demonstration-Lectures for Women	24,652	
Farmers' and Women's Institute Conventions	14,000	
Live Stock and Seed Judging Courses	11,963	
Cheese Factory and Creamery Meetings	13,274	
Vegetable Production Campaign	40,379	
Food Conservation and Preservation	15,580	
		120,548
Total attendance		442,938

BETTER FARMING SPECIAL

In January, February and March of 1917 the Institutes Branch co-operated with the Agricultural College in running two instruction cars over the Grand Trunk lines. Full day stops were made at the following points:—

Clinton, Seaforth, Mitchell, Shakespeare, St. Mary's, Ailsa Craig, Forest, Blackwell, Wyoming, Petrolia, Watford, Strathroy, Ingersoll, Milton, Georgetown, Inglewood Junction, Bradford, Newmarket, Maple, Beeton, Creemore, Collingwood, Thornbury, Meaford, Stayner, Elmvale, Penetanguishene, Cookstown, Thornton, Barrie, Orillia, Lefroy, Bradford, Newmarket.

The exhibits embraced the following: Selection, testing and improvement of seed; identification and eradication of weeds, drainage, soil moisture, growing of alfalfa, corn and potatoes; insect pests, plant diseases; protection from lightning; dairying, including milk testing; poultry raising; feeding stuffs and their comparative values at present prices; use of lime on soils; vegetable growing; labor-saving devices for the home, small models of sewage disposal and water-supply systems, etc.

Competent men were in charge and answered questions, explained the exhibits, and gave brief lectures to groups who visited the train, including a great many school children who were, in most cases, conducted through the cars by the teachers. The children were particularly interested in poultry raising, vegetable growing and the weed, insect and fungus disease exhibit.

There is no question that this form of instruction, both for the young people and grown-ups, is among the best that has been given, and with lectures of general interest and moving picture exhibits bearing largely upon agricultural subjects, at the evening meetings, the visit of the train was made of added interest and value.

STOCK JUDGING COURSES

Keen interest continues to be shown in two day Short Courses in Stock Judging, which have been a feature of the work under the direction of this branch for a number of years. The training which the farmers receive at these judging courses as well as at the Short Courses in Agriculture, conducted by District Representatives, and the Short Course given at Guelph each year, has resulted in higher and definite ideals in the stock breeding operations of many farmers,

especially the younger men. We have been fortunate in securing most capable instructors to carry on this work. The number of such men is limited, however, and more of such work could be carried on to advantage with a larger staff of capable demonstrators. During the season of 1916-17, 98 courses were held, with

Winter Short Course in Live Stock, held in a tent.

a total attendance of 11,963. The chief classes of stock receiving attention were dairy cattle, heavy horses, beef cattle, sheep, swine and light horses; relative interest being in the order named.

FARMERS' CLUBS

While a large number of Farmers' Clubs have emphasized commercial interests, the number of organizations holding meetings for the discussion of problems of production, etc., has materially decreased, largely, no doubt, due to the fact that labor is so scarce and so many young men who formerly took part in this work are now serving in the army.

With the assistance and encouragement of District Representatives and assistance from the various branches of the Department of Agriculture at Toronto, there is no doubt that club work will be a prominent feature when conditions become normal again. While it is the hope of the Department that Boards of Agriculture will become strong representative organizations in each riding, this cannot result unless local clubs are formed.

Boards of Agriculture, organized a few years ago, have taken up their work with enthusiasm in a few places, while in others they have not been so successful.

WOMEN'S INSTITUTES

The women of the Institute are so deeply interested and so busily occupied in patriotic work that little effort has been made to establish new branches, except with the object of bringing the women and girls together for patriotic work in those districts where such effort has not received much attention. In a few centres regular Women's Institute work has been practically abandoned until after the

war, but patriotic effort is being continued. The Department has sent to the officers of the Institutes from month to month a bulletin issued by the Red Cross Society, and has sent new issues of *War Work* as they appeared. In this way, and by occasional circulars, the members have been kept well informed from time to time through their officers as to the up-to-date needs along patriotic lines.

While it is difficult to get complete statements of patriotic work from all centres, we have received from a very large percentage of the branches full records as to their givings in both cash and materials. A conservative estimate would show that the Institutes have contributed from the beginning of the war up to the end of 1917, between seven hundred and twenty-five and seven hundred and fifty thousand dollars in cash and goods.

Eighty branches in Eastern Ontario gave in goods and cash for the twelve months ending with May, 1917, an average of $400 each. The following reports from individual branches will be of interest.

One of the two-weeks' classes in Domestic Science, held in a rural district.

Morewood Institute, in Dundas County, with a membership of forty-four, contributed $797.02 in cash and 3,953 articles valued at $838.80, from the beginning of the war up to May 31st, 1916. During the subsequent twelve months they received $985.69 from collections and contributions and raised $510.00 by the holding of teas, etc. During the latter period, 1,568 articles valued at $1,207.00 were sent to the Red Cross and in Christmas parcels direct to the soldiers. This makes a grand total of $4,338.51 in cash and goods since the beginning of the war.

Niagara-on-the-Lake has contributed $1,384.72 in cash, and 17,390 articles valued at $4,228.59, or a total of $5,613.31. In estimating the value of goods furnished, only the cost of the materials is considered, no allowance being made for labor.

The patriotic work of the Burgessville Institute is representative of what many small places are doing. They raised, during the year, about $500 for patriotic purposes, chiefly through the holding of entertainments, bazaars, ten cent teas, and

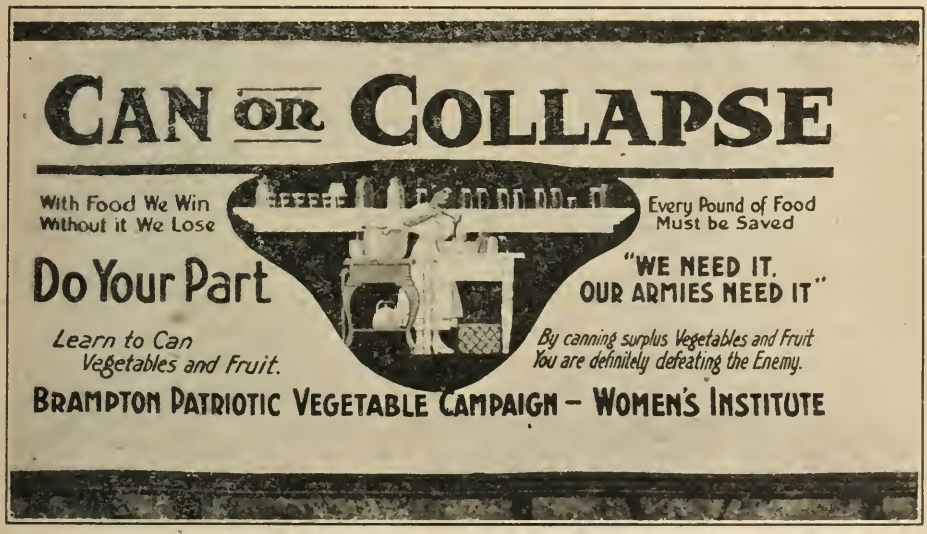
voluntary contributions. A variety of articles were sent to the Red Cross, many of which were well prepared by the girls of the Institute. Socks, shirts, pyjamas, bath towels, pillow cases, sheets, cotton and flannel binders, bandages, housewives, kit bags, scarfs, medicine tray cloths, scrap books, etc.

Besides this a box of comforts was sent to the boys valued at fifty dollars and at Christmas time fifteen boxes containing numerous small comforts were sent.

FOOD CONSERVATION

For many years the Women's Institutes of Ontario have given close study to food values, especially in relation to the feeding of the growing child, and their methods have always been along the line of economy. Since the outbreak of war the Women's Institute Branch has been appealed to by many other organizations for lecturers and literature bearing upon the canning and preservation of fruits and vegetables, war time breads, etc. Besides the annual report Bulletin 252 on "Preservation of Food—Home Canning," also 254 "War Breads," together with the following leaflets have been issued during the past year:

"Food Facts."
"Rations for War Time."
"Vegetables and Fruits."
"Milk and Cheese Dishes."


CAN OR COLLAPSE
With Food We Win
Without it We Lose
Every Pound of Food
Must be Saved
Do Your Part
"WE NEED IT.
OUR ARMIES NEED IT"
Learn to Can
Vegetables and Fruit.
By canning surplus Vegetables and Fruit
You are definitely defeating the Enemy.
BRAMPTON PATRIOTIC VEGETABLE CAMPAIGN – WOMEN'S INSTITUTE

One of the posters used in a Women's Institute Campaign.

Following the campaign for a greater production of vegetables, there was a general call for demonstrators in the canning and preserving of vegetables and fruits. A conference of persons well qualified by experience and training to give instruction along this line was held in Toronto for the purpose of unifying methods and securing up-to-date information. Demonstrators were sent to 175 centres with an aggregate attendance of 15,580. A number of centres asked for exhibits and demonstrations in the canning of fruits and vegetables and the making of war breads at the fall fairs. Equipment was provided and demonstrators furnished for Toronto, Ottawa, Picton, Peterboro, Stratford, Chatham, Windsor.

This campaign was most successful and very much appreciated by country women as well as the residents of the villages, towns and cities. A larger quantity of vegetables was saved through this campaign for winter use and will be an important factor in releasing a larger quantity of the more concentrated foodstuffs for export.

A CANNING CENTRE

In connection with this campaign the Department co-operated with the County of Middlesex Women's Institute and Red Cross Society in establishing a canning centre at Parkhill.

The women of this place secured the armories for use as a canning centre, and the Department furnished the equipment. An eight horse-power boiler, which received water from the town water supply, was placed in the back of the room. In the cook room two large wooden vats lined with galvanized iron were placed, one for sterilizing the canned fruit, the other for scalding, blanching, etc. In addition to this, there was a steam heated copper kettle for making jam, jellies, pickles, etc. Glass jars were furnished by the Red Cross Society for overseas canned food, while occasionally the Canadian Military Hospital or Convalescent Homes were asked to send jars to be filled and returned.

It was opened in July, and until late in the fall the women and girls left their work at home and rendered volunteer service in shifts, for a day, or half a day or perhaps a day and a night when the rush was on. Over one thousand quarts of chicken alone were canned, and in all, over four thousand quarts of chicken, pickles, fruit and vegetables were canned in addition to what was canned for home use.

Plans are being made for an extension of the work to a number of centres in 1918. Full particulars of the Parkhill centre will be found in the Women's Institute Report for 1917.

At the Canadian National Exhibition, Toronto, the Department supplied demonstrators in milk and cheese cookery, soft cheese making, war breads and canning. Leaflets and bulletins relating to each branch were distributed to those enquiring for information. The Toronto Thrift Committee rendered valuable assistance in planning for and conducting those demonstrations. The demonstrators in soft cheese making and milk and cheese cookery went from Toronto to the Ottawa Exhibition and put on a similar demonstration there.

Smaller three day exhibitions were held at Picton, Peterborough, Stratford, Chatham, Windsor, etc., and canning demonstrators were present at each, holding from three to seven demonstrations at each place, with an average attendance of from seven hundred to two thousand.

DEMONSTRATION-LECTURE COURSES

Courses of two weeks each were held at seventy places. Twenty-five classes took advantage of the Domestic Science Course, twenty in home nursing, and thirty-five in the sewing course, with an aggregate attendance of 24,652. Each course extended over a period of ten days and covered very fully information, both theoretical and practical, sought by the home-maker. Printed leaflets of recipes and general information have been issued by the Department for the Domestic Science Classes to be held in 1918.

The giving of systematic instruction to groups of women and girls will, no doubt, be considerably extended when conditions are normal again. While only a small number of members, because of their interest in patriotic work, are inclined to devote time to Demonstration-Lecture courses, experience has shown an in-

creased interest in patriotic work at the conclusion of the classes, and usually the number of workers has increased as a result of holding the classes.

MEDICAL SCHOOL INSPECTION

Since a number of regular Institute workers have medical training and are qualified to carry on Medical Inspection in the schools, some of their time has been devoted to this feature as an experiment. Lincoln County was almost completely covered and two points in Peel County were thoroughly inspected, while a limited amount of inspection was carried on in Rainy River, Thunder Bay, Manitoulin, Glengarry, Grey and Brant. Reports compiled show that the subject is worthy of more attention.

The members of the Institutes are taking a keener interest from year to year in all that effects the health and welfare of the child. At the Western Ontario Convention two of their number were appointed to represent the Institutes on the Child Welfare Committee for Western Ontario.

GIRLS' WORK

In a very few places the girls have organized an Institute of their own. Orillia has a girls' Institute with a membership of over 100, carrying on patriotic work in its many phases. In the majority of places the girls have organized as an auxiliary to the main organization. Their co-operation was secured chiefly through Demonstration-Lecture Courses that were held in these places.

ANNUAL CONVENTIONS

Perhaps the one thing more than any other that is responsible for the enthusiasm and success of the many branches throughout the year is the holding of the three annual conventions. The one for Eastern Ontario at Ottawa; for Western Ontario, at London; and for Central and Northern Ontario, at Toronto. Practically every branch sent one or more representatives, while those within motoring distance came in very much larger numbers. Every phase of work of practical value received attention, and up-to-date information was given by various prominent speakers. The resolutions adopted at the Toronto Convention show how widespread the work has become. Those resolutions approved the work of the Food Controller and pledged him support, advocated education as a precaution against the spread of communicable diseases and further legislation relative thereto; requested additional grants of funds to enable the Institutes to further prosecute their work relating to Medical School Inspection; appealed to the Government for prohibition of the use of cane sugar in the manufacture of candy and the sale of ice cream, pledged the efforts of the Institutes towards securing the use of fair grounds as recreation centres; favored the extension of women's labor; deplored the high cost of living, and urged that official action be taken in order that children may not be unfed, underfed or illfed. A full record of the Conventions will be found in the Annual Report of the Women's Institutes.

DAIRY BRANCH

While the dairy farmers were somewhat handicapped through unfavorable climatic conditions during a part of the season, and were forced to pay unprecedently high prices for concentrated feeding stuffs, the volume of milk produced in 1917 for factory and creamery purposes, was only about 8 per cent. or 9 per cent. below that of 1916. The quantity furnished to condensories and milk

powder factories was considerably increased, while the city milk and cream supply was about normal. Dairymen, especially the patrons of cheese factories, are to be complimented for producing such large quantities of milk under discouraging feed and labor conditions. They nobly responded to the appeal for "Greater Production," and did their best to keep up, and if possible increase, production, and they can be depended upon to do their patriotic duty in this respect in 1918.

The season of 1916 saw the highest prices on record up to that time for dairy products of all kinds, but prices for 1917 were considerably in advance, averaging nearly 3c. per pound increase for cheese, and 6½c. increase for butter. The prices paid for milk and cream for city trade saw an even greater advance, while the condensories and milk powder factories paid prices which enabled them to draw from the factory and creamery supplies. While the quantity of cheese produced in 1917 was slightly below that of 1916, the total value was greater. The creamery butter output decreased about 10 per cent., while condensories and milk powder factories materially increased their business.

The output of the cheese factories operated in Ontario in 1917 was approximately 120,000,000 lbs. of cheese valued at $25,300,000, while the creameries manufactured approximately 25,000,000 lbs. of butter valued at $10,000,000, or a total of $35,300,000 worth of cheese and butter from our dairy manufactories. With the addition of dairy butter, milk powder, condensed milk, and milk and cream used for city trade, including ice cream, the total of the Ontario dairy output for 1917 was approximately $65,000,000, and when we add to this the additional production of hogs on account of available dairy by-products the volume is considerably increased.

There has been marked development along dairy lines in North Ontario during the past two or three years. A large creamery has been established at Sudbury, and the Government erected a splendid plant at New Liskeard. The receipts of cream the first season have been beyond expectations, and many farmers in the north are planning to put in large dairy herds. We now have five creameries and twenty-one cheese factories in North Ontario, with every prospect of the industry growing to large proportions in this section of the Province.

Our staff of 31 dairy instructors were successful in maintaining a uniform high grade output throughout practically the whole season, in the 990 cheese factories with their 42,066 patrons, and 172 creameries with their 45,944 patrons. With the exception of about two weeks in July, the quality of the cheese was well maintained.

As an evidence of the confidence in the permanency of our dairy industry, factorymen have spent $140,000 in erecting six new factories and improving the old ones, while $118,000 has been spent on the creameries.

The makers were forced to use substitutes for rennet to a considerable extent, and through lack of experience had occasional trouble, but on the whole the quality was satisfactory. It is doubtful if the Province ever turned out such a high percentage of first-class quality cheese as in 1917.

With the introduction of butter grading, and a large number of makers pasteurizing their cream, there was a marked improvement in the quality of much of our Ontario butter. This was evidenced in the higher standing of our output in the exhibits of creamery butter as compared with former years.

It is now fifteen years since the Department organized dairy instruction work, and the uniform high quality of our cheese and butter is an evidence of efficiency and energy on the part of those responsible for the field work.

A special effort was made by the instructors to secure a clean milk supply, and in this connection 10,998 sediment tests were made during the season, with the result that many patrons who thought their methods quite up-to-date, were induced to take even greater care in the production and handling of their milk. This campaign is reflected in the high quality and uniformity of the goods produced.

In order to overcome in part the lack of labor on the dairy farms a large number of patrons have installed milking machines, 625 being found in Eastern Ontario, and a large number in the Western section of the Province.

Whey butter is now made in 156 cheese factories. With the scarcity and need of fats for food purposes during war time, the 525,000 lbs. of whey butter manufactured is a much needed addition to our supplies.

With the gradual increase in cooling rooms, septic tanks, and the pasteurization of whey, the dairymen are giving evidence of a desire to place Ontario cheese in a still stronger position on the British market.

Judging from the number of applications for forms upon which to keep herd records of production and butter-fat content, the farmers are taking a keen interest in weeding out the unprofitable animal. This is a feature of growing importance as the price of foodstuffs advances. This weeding out process with the introduction of breeding stock of superior quality, cannot but result in a marked improvement in our dairy cattle.

The chief variation in the fat content of milk delivered to Western Ontario cheese factories is from 2.6 per cent. to 4.2 per cent., or a difference of 1.6 per cent. which, with butter fat worth, say 50c. per lb., makes a difference in value between low and high testing milk of 80c. per hundred pounds. Surely the dairymen who are producing a higher testing milk will not continue to suffer this injustice for long. As an evidence of an awakening in this respect, we have 127 factories paying by test during 1917, an increase of 19 over the previous year. The criminal practice of adulterating milk is altogether too common and will no doubt continue so as long as the present pooling system of paying for milk is followed in such a large number of factories.

BUTTER GRADING

Following the experimental work outlined in the report for 1916, a Government butter grading station was opened at the Municipal Abattoir, Tecumseh Street, Toronto, on May 1st, 1917. Twenty-six creameries took advantage of the service offer. Some of the grading was done in the cold storages of the creameries concerned. One thousand five hundred and four samples were graded at the grading station and 1,795 in the storages owned by the creameries. In addition to this there were 269 samples received from creameries which did not take advantage of the regular services, making a total of 3,569 samples, representing about 2,500,000 lbs. of butter.

Eighty-one per cent. of the samples graded were of first grade, scoring ninety-two points or over. Nineteen per cent. were second grade. A very strong market with a gradual increase in high prices throughout the season, resulted in the usual attention not being paid to quality by the purchaser. Most any quality of butter could be handled at a fair profit. Considerable butter was, however, sold on the grade certificate. Butter made from unpasteurized cream deteriorated in value while in storage, developing flavors that were very objectionable. It is advised that a grade called "Special" be introduced for high scoring butter that has been pasteurized. The official butter grader has been able to render splendid service to the makers by drawing their attention from time to time to any defects which

might be shown in the butter, and in many instances has been able to correct the defects immediately. The introduction of this feature of work has been more than justified and the creamery men will no doubt take advantage of the service in larger numbers another season. Quality in butter is of added importance since the introduction of oleomargarine.

As has been the custom for a number of years, the Department offered to send speakers to the annual meetings of cheese factories and creameries, or if this could not be arranged, to send a speaker to a *special* meeting called by the officers of the factory or creamery concerned. For the most part the speakers were drawn from the regular instruction staff and were enabled to come into personal contact with the patrons and thus induce them to take better care of their milk and cream, and to make the necessary improvements in the manufactory to enable the makers to turn out high class goods.

FRUIT BRANCH

The season of 1917 was, with few exceptions, a disastrous one for the fruit growers in Ontario. Certain sections had good crops of small fruits which sold at record prices, while individual growers here and there obtained fair results from their orchards due more to the high prices than to the heavy crops. Apples were a complete failure and at no time in the history of the Province has there been fewer home grown apples on the markets than in 1917. Following the bad seasons of 1915 and 1916, there were naturally expectations of at least an average crop of this fruit, which could have been put upon our Canadian markets at a reasonable price. Growers, already discouraged by three bad years, were so disappointed that undoubtedly large acreages will be further neglected. This movement will be hastened by the urgent demand and high prices for all other farm crops and the serious labor conditions. Any movement of this nature naturally tends to enhance the value of those orchards whose owners persist in their care despite the low returns during these bad seasons.

The Fruit Branch has continued its efforts to keep up the enthusiasm of the growers so that as soon as normal conditions return they may be able to again

Shipping canned fruit by the car load to the seaboard for overseas.

secure a reasonable return from their orchards, vineyards and small fruits. Conditions in the country, however, have been reflected in the decreased demand for orchard meetings, pruning and spraying demonstrations, packing schools, etc., and it is becoming increasingly difficult to arouse any interest in these matters under the labor conditions now existing. Fruit growing and truck farming both require abundance of labor on small acreages. Fortunately, the Bureau of Labor helped very materially in 1917 in the harvesting of fruits by securing the service of several hundred girls from the universities, high schools, offices and factories. This labor proved very satisfactory, and too much praise cannot be tendered to these young ladies for their timely assistance in such an emergency.

The demonstration orchards of the Department were continued at the following points: Thedford, Collingwood, Whitby and Wellington, with experimental orchards at Maitland on the St. Lawrence River, and Richards Landing on St. Joseph's Island, Algoma. The Northern Ontario Plant Breeding Station at Fort

William, started in 1916, was placed in charge of a director, and equipped for the carrying on of special work in fruits and vegetables for the northern parts of the Province. The Horticultural Experiment Station at Vineland was further extended in acreage by the purchase of seven acres and the lease of an additional fifty acres of adjoining property. Full reports of these stations follow.

The Department again undertook to furnish the hospitals in France and Britain with a supply of fresh apples and canned fruits and jams. Despite the unfavorable year, over a thousand tons were gathered together and are now being forwarded to destination as ships are available. Thirty thousand boxes of fresh apples were packed largely from the orchards in Northumberland and Prince Edward Counties where the bulk of the crop was produced this season.

FIELD AND INVESTIGATION WORK OF PROVINCIAL ENTOMOLOGIST

The work of the Provincial Entomologist is always of great interest and importance to the fruit growers of the Province and is briefly reported as follows:

(1) Dusting Versus Spraying for the Control of Fruit Tree Insects and Plant Diseases. A second year's test of the dust method has now been made. Two apple orchards, each of about six acres in extent and situated in the Grimsby district, were selected for the purpose. Approximately one-fourth of each orchard was treated throughout (three sprayings) with the liquid spray, lime-sulphur and arsenate of lead, on the dates and with the strength recommended in our Spray Calendar. The remainder (except forty-eight trees in one orchard) received a heavy dormant or semi-dormant spray with lime-sulphur for San José Scale and then was dusted just before and just after the blossoms fell. Fifty-three trees in one orchard received a third dusting three weeks after blossoms fell, the chief object being to see the effect of the late application on Codling Moth.

The forty-eight trees mentioned above were dusted while still dormant with a dust composed of finely ground sodium-sulphide and talc, to test the value of this mixture upon San José Scale.

Results on Apple Scab. In the one orchard, having a crop of approximately 200 barrels, both the liquid and the dusted portions were almost totally free from scab, there being less than 1 per cent. of scab on either portion. This was true even of dusted Snow apples. Check Snow trees showed over 90 per cent. scabby fruit, and Greenings and Baldwins averaged over 50 per cent.

In the other orchard the ground was very rough, making dusting difficult and dangerous. The crop was also light—only about thirty barrels. In this orchard there was an average of 99 per cent. of scab—free fruit on the sprayed portion and of about 90 per cent. on the dusted portion. So that in this case the liquid was superior.

Results on Codling Moth. In neither orchard could those in charge see any difference in the effectiveness of dusting and spraying for this insect. Owing to the smallness of the crop in the second orchard (thirty barrels to six acres) these insects centered on the individual fruits, with the result that nearly 50 per cent. of the apples were wormy. In the other orchard where the crop was larger, though still a light one (200 barrels to 6 acres), the percentage of worms on the parts that received only one application for Codling Moth, namely, the one after the blossoms fell, was between 25 per cent. and 33 per cent.; but on the fifty-three trees that received an extra application of the dust this was reduced to between 8 per cent. and 10 per cent. This shows very clearly that this year a late application for Codling Moth paid well. The results on this insect were observed in other orchards visited during the year.

Results on San José Scale. The sodium-sulphide and talc dust completely controlled this scale on the forty-eight trees dusted, though some of them had been badly infested. Whether it would do so every year if well applied is questioned by those in charge. Great pains were, of course, taken to do the work most thoroughly and to give the dust every chance.

Results of Dusting in Other Parts of the Province. Several apple orchards where dust had been used were visited, but in all of these the results were somewhat disappointing so far as scab control went. In some cases a portion of the orchard had been treated with the liquid and this portion was noticeably freer from scab. In all cases the dust appeared to have controlled Codling Moth as well as the liquid spray.

General Conclusions Regarding Dust for Apple Orchard. In spite of the satisfactory results obtained last year and again this year, his opinion is that it is very doubtful whether the average fruit grower would not make a mistake in substituting dusting for spraying. Lack of labor during the war may of course make it advisable to dust in large apple orchards, because of the very much greater rapidity and ease with which an orchard can be treated with dust than with spray.

(2) Control of Brown Rot on Sweet Cherries. During the last two years a study has been made of how to improve upon the methods of controlling this very destructive disease of sweet cherries. A method believed to be satisfactory has been discovered and is as follows: Spray the trees first a day or two before the buds burst with lime-sulphur, strength 1.035 sp. gr. (nicotine-sulphate may be added to control Aphids). Spray again with lime-sulphur, strength 1.008 sp. gr. plus 3 lbs. arsenate of lead to every 40 gallons of the liquid, as soon as all parts of the blossoms have fallen and left the fruits naked. Use the same mixture again just as the cherries are beginning to color. Bordeaux and arsenate of lead may be substituted for lime-sulphur and arsenate of lead in the second and third applications. Lastly, dust the trees with finely ground sulphur and talc (without any poison) two or three days before picking begins. This last treatment is the chief improvement upon the older methods for it enables a fungicide to be applied at the very time when there is usually the greatest need and yet does not stain the fruit or make it dangerous to consumers through the presence of poisons. By this method of treatment this year we were able to save almost the entire crop in two good orchards of about 100 trees each. There is no doubt, as shown by check trees, that otherwise most of the fruit would have rotted; for the season was very favorable to the development of Brown Rot. This method of treatment implies, of course, the possession of a duster, but one such machine would suffice for at least ten fruit growers and could be used also for dusting grapes.

The general adoption of this method would, in at least some seasons, mean an increased return of several thousands of dollars to cherry growers. The method could be extended to include varieties of plums that are very susceptible to rot.

(3) Pear Blight. This is now the fifth year's test of the field control of this disease in pear orchards. This year over thirty acres of pears were under charge. The results obtained during these five years show that at least with the weather conditions that have prevailed and under the sort of surroundings to be found in the Niagara district, it is quite possible to control satisfactorily this very destructive and much dreaded disease. The cost of treatment has not been at all high, so that expense need not deter any man. Experience has shown us that most failures to control the disease are due to three or four causes, the chief of which

are: Entrusting the work to the wrong man or men; failure to remove the blighted branches or hold over blight in late autumn, winter or very early spring before the sap movement begins; failure to remove blossom blight promptly after it becomes visible and failure to disinfect cuts and tools.

(4) Blackberry Leaf-miner. The leaf-miner is the larvæ of a small, black four-winged fly, known as a sawfly. It sometimes becomes so adundant as to destroy by its mines between the upper and lower surface of the leaf a large proportion of the foliage in infested fields. In such a case the bushes look as if they had been struck by some devastating blight. Growers of blackberries have very naturally been much alarmed by the injury to the leaves. We have been devoting some attention to this pest off and on for several years, and had tested the measures recommended by entomologists and also several other remedies, all of which aimed at destroying the larvæ or pupæ. None of these measures, however, were found satisfactory. Fortunately, we discovered this autumn that the adults, contrary to what was believed, could be poisoned with arsenate of lead. Plans are already being made to work out all the details of this method next year so that explicit, well tested directions may be given to the growers.

(5) San José Scale. Some further study of the life-history and degree of parasitism of this pest has been made, and also of the distance to which its larvæ may be blown by the wind. It was found that parasites were much more abundant than suspected. Mr. Flock, the writer's assistant, from sixty twigs, each about nine inches long and averaging from one-third to one-half an inch in diameter, reared approximately 2,000 individual parasites, most of them of the species Prospaltella perniciosi Tower. About three years ago we imported a number of these and other parasites into the Niagara district, but whether those now at work are the result of that act or the natural distribution of and increase of the species is difficult to determine.

In testing the distance the larvæ may be carried by the wind there was only a moderate breeze on the days that could be devoted to this work. In such a breeze it was found that some were carried fifty feet. There is, therefore, no doubt that with a much stronger wind they would be carried a good deal farther. It is aimed to test this method much more fully next year, as it is important in connection with control measures and especially in the case of nursery stock.

(6) Apple Maggot or Railroad Worm. Further laboratory study of the effect of insecticides upon the adults of this pest have been made by the writer, and these have been backed up by spraying experiments on orchards near Brockville and Trenton respectively. The spray work was done in co-operation with Mr. W. A. Ross of the Entomological Branch, Ottawa, but the laboratory tests were done by the writer. Both laboratory and field work gave further proof that this troublesome insect can be readily controlled by spraying with arsenate of lead applied when the adults begin to appear and repeated two weeks later. Almost all data required for a full account of the life-history and control of the insect has been accumulated, but the war may make it desirable to postpone publication for another year.

(7) Nurseries and Orchard Inspection. This work has gone on as usual and there is nothing new to report from what was said last year, except that nurserymen are becoming more thorough in doing their part to help the inspectors

to eradicate San José Scale from infested parts of the nurseries. The results have been gratifying.

Some new insecticides have been tried during the year, but none seemed superior or quite so safe as those being used at present.

An attempt was made to find whether any variety of raspberry was immune to the destructive disease known as *Raspberry Yellows*. So far as could be determined the *Herbert* variety appears to be immune. It is a good yielding berry but the flavor of the fruit is not so good as that of the Cuthbert.

HORTICULTURAL EXPERIMENT STATION

The past year has witnessed considerable expansion in this institution. Seven acres on the opposite side of the road and with a road frontage have been purchased and an additional fifty acres have been acquired by lease for a number of years with the option of purchase. This land will be used to set out many thousands of seedling fruits resulting from the plant breeding work.

Contracts have also been let for a much needed addition to the greenhouse accommodation. This involved a new central heating plant which is also under way. It is expected both will be completed and ready for operation early in the spring. Improvement has also been made in the water supply, assuring an ample quantity for all needs.

PLANT BREEDING

The abnormally wet spring was very disappointing to the plant breeding work and further emphasized the need of greenhouse space to carry on this work under control conditions. Two greenhouses 30 by 75 are at present under construc-

A test of Northern vs. Southern grown seed potatoes made at Vineland.

tion and we feel confident their use will very greatly increase the efficiency of the plant breeding work.

The commercial tests of the many strawberry seedlings have had to be deferred owing to their location on unsuitable soil and the wet season at fruiting time.

These seedlings will be moved to the new property and given tests under average strawberry conditions. The raspberries selected last year have been given a further selection and a number have been selected from the new plantation which fruited for the first time. All such material must be given several years' trial before its definite value can be proven. Many other seedling brambles and small fruits have made satisfactory progress.

Considerable new cross-pollination work has been accomplished in many of the small fruits but with only fair results in the amount of fruit set and gathered. Work was done with the following fruits: Strawberries, raspberries, blackberries, dewberries, gooseberries, currants and loganberries.

The first tree fruits of former years' breeding work commenced to fruit this season and although the numbers fruiting were insufficient upon which to draw definite conclusions, yet they indicate very interesting and useful results. The policy of handling these has had to be modified in several instances and in particular, more space given to individual trees to develop normally. The acquisition of the new property has made this possible. The hand pollination and crossing work is being continued with undiminished effort and the following table gives a summary of the actual crossing in tree fruits for 1917:

Kind of Fruit	Number of Pollinations	Number of Fruit gathered
Peaches	2,603	371
Plums	1,164	84
Cherries	1,800	197
Pears	3,056	54
Grapes	No record	16,009 seeds
Apples	1,604	21

Supplemental to the above hand pollination work large numbers of seed have been gathered from which to grow open pollinated seedlings. The experience of former years has shown that this is a good line of work and one from which marked results may be expected with the minimum of work; but with the disadvantage of only one parent of each individual seed being known, leaving the identity of the other parent a problem and of that much less value in scientific deduction and guidance in the work in the years to come. The following numbers of seed have been saved and are being propagated in cold frames and will receive the same treatment as all our other fruit seeds:—

Peaches	2,305	Cherries	5,892
Plums	5,153	Pears	7,524

A number of other minor breeding experiments have been conducted and are reported on through the medium of the Fruit Branch Circular whenever there is any information ready to be given to the general fruit grower.

POMOLOGY

Work in Pomology has been carried on as in former years, much time being given to the identification of the various fruits, many varieties of which, especially in peaches, were found to be incorrectly named. In peaches, 28 varieties for a total of 48 trees were found to be incorrectly named and most of them have, therefore, been removed. Seventy-five varieties for a total of 278 trees were

found to be true to name and 22 trees have not yet been positively identified. A few of those incorrectly named have been retained because of promising features. Twelve varieties for a total of 34 trees which were incorrectly named have been identified and given their proper name. It was also found necessary to remove a considerable number of cherries and plums because of their being incorrectly named.

VEGETABLE GARDENING

During the past season extensive variety testing was carried on with nearly all the common vegetables. Most attention was given to asparagus, potatoes, tomatoes and peas. Also some irrigation and fertilizer experiments were undertaken on a few crops. A number of different kinds of seeds were tested and reported on to the persons sending them in. A large amount of vegetable seed produced on the farm in 1916 was distributed to many vegetable growers in the Province for comparative testing with seed secured through the ordinary trade channels.

A fair amount of specially selected seed was produced this year from stock which has been undergoing selection for several years. A small amount of this seed will be available for distribution in 1918.

A number of different seeds was received from various places and tested out. All gave fair results but in very few instances did any of this seed excel seeds of our own production.

Reports received from some twenty vegetable growers who have tested our seed during the past season speak very favorably of the results, some claiming to be the first on their local market with produce from these seeds.

The seeds produced on the farm during 1917 amounted to over fifty pounds of beet, several pounds of onion, carrot and radish seed, and of course, varying amounts of tomato, pea, corn and melon seed are produced every year. Particular attention is given always to type and purity of the strain as well as the yield and other desirable characters in making selections of all our seed stock.

FRUITS FOR THE CANADIAN MILITARY HOSPITALS

The production of high quality canned and preserved fruits for use in the Canadian Military Hospitals overseas has been conducted by the Department of Agriculture during the past three years. The Horticultural Experiment Station, located at Vineland Station, in the heart of the Niagara fruit belt, has proven to be admirably situated for obtaining practically every Canadian fruit.

This work has been undertaken carefully. The output has been gradually increased. Every effort has been made to produce economically and to prevent waste.

During the season of 1917 the shipments amounted to 100,000 gallon tins. All classes of material were packed in the same sized container. The jams produced weighed 90 tons net and included strawberries, raspberries, black currants, blackberries, gooseberries and peaches. Besides the jams there were 45,990 gallon tins of peaches, 21,752 of pears and 7,974 of other fruits all canned in a heavy sugar syrup. The total weight of *prepared raw fruit* represented in the season's pack was 441,000 pounds.

It should be stated that 1917 was a difficult season in which to obtain high grade fruit. Had not the Vineland factory been located close to the berry patches much of the strawberry crop would have been lost on account of the constant rain.

Peaches failed in many cases to mature properly, frosts spoiling the best late varieties.

Canning operations were, however, carried on constantly from July 10th until January 10th. The staff required to do the work varied from 30 to 65 persons, mostly women.

Small canning factory at Vineland, which has put up a million and a half pounds of fruit for Canadian soldiers overseas.

APIARY INSPECTION AND DEMONSTRATION

The following is a list of inspectors and the counties in their charge:—

Angle, W. B. ..... Wentworth, Brant, Victoria, Hastings, Peterboro.
Armstrong, Jas. .... Lincoln, Welland, Frontenac, Grenville, Leeds, Lennox.
Christain, J. E. .... Muskoka, Simcoe.
Denison, Alf. ..... Dundas, Prescott, Russell, Gloucester, Carleton (Osgoode).
Devins, C. J. ..... Grey, Dufferin.
Fowler, R. A. ..... Perth, Waterloo.
Gowan, L. B. ..... Norfolk, Haldimand.
Hunter, R. M. ..... Oxford.
Hutchinson, E. .... Wellington.
McCauley, J. H. ... Halton, Peel.
Robertson, N. ..... Essex, Kent, Elgin.
Rumford, S. ..... Lambton, Middlesex.
Sehrank, J. S. ..... Bruce, Huron.
Scott, W. ..... Northumberland, Prince Edward.
Selwyn, W. H. ..... Glengarry, Stormont, Lanark, Renfrew, Carleton (Ex. Glou. Osg.)
Weir, W. A. ..... Durham, York, Ontario.

The backward spring and frequent rains in early summer made the inspection work very difficult. It also held back the home work of the inspectors so that in many cases they refused to leave home when the weather became favorable for inspection work. On this account the money available for inspection and demonstration work was not all used and not nearly all of the known cases of disease were attended to. This is one of the worst features of our system of inspection by men who are not devoting their whole time to the Government work.

Our leading beekeepers are convinced and have stated publicly that great headway is really being made by the education of beekeepers who are learning to act as their own inspectors and are learning to regard either variety of foul brood as no less an enemy but one which can be kept very much under control.

Seven hundred and seventy-eight apiaries were inspected and 203 of these were found to be diseased with either American or European Foul Brood. Eight thousand, five hundred and fifty-seven colonies were examined and 1,132 were diseased. Two hundred and seventeen colonies were destroyed or treated by the inspector. The owners of the other diseased colonies were instructed as to methods of treating them and most of them reported afterward that they had followed out instructions.

The legislation referring to the disposal of bees was frequently enforced by inspectors and in several instances sales were stopped. As far as possible all intended sales and removal of bees were discovered and examination made before bees were removed.

Discussing bees and their habits.

In addition to the personal visits of inspectors, instructions were carried to beekeepers by means of local apiary demonstrations to a greater extent than ever before. Eighty-three of these meetings were held in all parts of the Province and the total attendance at these demonstrations was 2,686 or an average of 32 persons at each. Considering the highly specialized nature of the subject and the fact that comparatively few in a community are interested in bees, also that these demonstrations have been held extensively throughout the Province for seven years, it must be admitted that they are meeting the desires and requirements of Ontario beekeepers.

These meetings are conducted in almost every case by the inspector for the district. Some of them were interfered with by unfavorable weather, but the people have learned that bee demonstrations will be conducted punctually as advertised regardless of weather conditions and that they will not be postponed under any circumstances. The inspectors were instructed this year to make the demonstrations as practical as possible.

NORTHERN ONTARIO PLANT BREEDING STATION

Two Departments of the Ontario Government, that of Agriculture and of the Provincial Secretary, co-operated to bring into being the Northern Ontario Plant Breeding Station, on the Industrial Farm which is situated about nine miles south-west of the City of Fort William. The Department of the Provincial Secretary supplies the land, greenhouses with accompanying buildings, and furnishes the unskilled manual labor and the horse labor; the Department of Agriculture employs the skilled men, directs the activities of the Station, obtains any specialized machinery, etc., required and meets the expenses of maintenance.

The primary work is to learn what fruits, vegetables and ornamentals, now available in the trade, will thrive in Northern Ontario. The next step is to comb the wilds for plant specimens of horticultural promise, propagating these with the object of taking advantage of any variation pointing to improvement, and then using the best of these indigenous plants with the best-adapted, quality, domestic strains in breeding up a hardy pomology and a satisfactory horticulture for the vast regions of the northern and western parts of the Province.

HISTORY

The first work was done in May, 1916, when a number of different sorts of apples, plums, cherries, bush fruits and strawberries, and a few ornamental plants were set in the seven-acre nursery allotted for the work. Severe handicaps met

Hybrid raspberry plantation at Vineland, where each plant and its fruit are carefully recorded and tested.

this initial endeavor. The land was not in good condition, the planting was done late in the season and the succeeding prolonged spell of dry weather was very unfavorable to the plants. Considerable quantities of plum and apple seeds were sown and many of these have done well.

In March, 1917, the work was put under the jurisdiction of the Fruit Branch.

The greenhouse, about 84 feet by 20 feet, with a partition making provision for two temperatures, had been erected; suitable land was selected, and nursery stock ordered from most of the Canadian nurserymen who specialize in hardy strains.

The land used included the 1916 nursery; a three-acre plot for vegetables and small fruits; three-acres on a northern slope to the west of a large natural grove, for a plantation of tree fruits; and a small area for vegetables one and a half miles to the north. This latter is light, sandy loam and was planted in order to compare results with those obtained in the main vegetable garden where the soil is rather a heavy clay loam.

A three-acre field adjacent to the greenhouse will be made into a permanent orchard. The garden will be extended in 1918 to comprise about ten acres and the understanding is that as more land is required for the different branches of the work, it will be turned over to the Station.

1917 PLANTINGS

In the Garden. Commercial varieties of cabbage, cauliflower, Brussels sprouts, turnips, beets, carrots, parsnips, salsify, Swiss chard, kohl rabi, onion, leeks, shallots, radish, lettuce, endive, parsley, horse radish, seven kinds of herbs, rhubarb, asparagus, tomatoes, corn, squash, pumpkin, melons, citrons, marrows, cucumbers, peas, beans, celery and potatoes.

Seventeen varieties of raspberries, 14 of currants, 8 of gooseberries, 1 of dewberries and 13 of strawberries.

In the Tree-fruit Plantation. As well as a number of seedlings, the following were set: 36 named varieties of standard and crab apples; 2 of pears: 19 of plums and hybrids; 7 of cherries.

On the west and north, a windbreak of willows—golden and laurel-leaf—were placed. On the western side, this shelter-belt was increased by a row of mixed native fruit plants, plums, red cherries, choke cherries, high-bush cranberries, nanny-berries and Saskatoon-berries.

In the Nursery. Fourteen named varieties of apples; 500 2-year-old apple seedlings; 1,000 green ash; 1,000 caragana; 30 kinds of shrubs; 5 of evergreens: and 3 of woody climbing plants. Numerous native shrubs and seedlings of forest trees were brought across the fence from the nearby woods and valleys.

In the Seed-beds. Eighty-two different sorts of tree and shrub seed and 33 of hardy herbaceous perennials and climbers.

In the Greenhouse. A number of different crops were grown besides the collection of flowering plants. The different long-season garden vegetables as cabbage, leek, etc., and the bedding plants for the flower borders were started here. Several hundred each of apple, strawberry, raspberry and currant plants were started as seed in the greenhouse. The apple seedlings were moved to the field in early summer and went into the winter in well hardened-off condition. Some of these plants attained a height of two feet.

Good crops of lettuce, radish, water-cress and tomatoes were harvested; and in early spring, a crop of rhubarb was forced. The few cucumbers and melons which filled available spaces, bore well.

Under one of the side-benches was placed an interesting collection of native ferns, mosses and flowering-plants from the forest.

During the winter root-grafting of apples and the hybridizing of raspberries

and strawberries will be done in the greenhouse buildings, bedding-plants for spring planting will be developed and the seed now borne by vegetable plants, will be matured. The potting-shed serves as a convenient work shop and in it are made, during the winter months, contrivances to be used in the gardens for the better production of tender plants.

Flower Beds. These were of annuals only and made a good showing—some of the beds looked well until late September.

Seed Production. The seed ripened by the end of the outside growing season includes 2 varieties of beans, 6 of peas, 6 of tomatoes, 3 of salsify, 3 of marrow, and 1 each of carrot, parsnip, beet, cucumber, pumpkin, squash, and tobacco. A number of different sorts of flower seeds were gathered from selected plants.

During the winter, in the greenhouse, the following seed-bearing plants are growing, 4 varieties of cabbage, 2 of Swiss chard, 8 of tomatoes, and one of Brussels sprouts, celery, parsley, salsify, sage, thyme and marjoram.

An effort was made to secure the best native seed-bearing plants. The success attending these was very encouraging. A number of native fruits of marked excellence were found. This refers particularly to the plums, which are of at least seven different types; red cherries, choke cherries, Saskatoon-berries, and raspberries, red and white. The attractions among the ornamentals, indigenous to this country, are many, ranging from swamp cryptogamias, through forest climbers and flowering shrubs, such as the alder-leaved rhamnus, honeysuckles, dogwoods, yew, etc., up to the prominent forest trees, white pine, spruce, cedar, birches, ashes, elm, oak, basswood, mountain ash, sugar maple, etc.

In all, seed was collected from 56 kinds of native woody plants, as follows: 23 of fruit, 4 of nuts, 8 of evergreens, 21 of deciduous trees and ornamental shrubs.

Quantities of seed of the selected fruits, birch and sugar maple were sent to interested horticulturists. The Thunder Bay hills are said to mark the north-western limit of the hard maple in nature and it will be interesting to determine if seed from these trees will produce young maples which shall prove of sufficient hardiness to grow satisfactorily in the habitated parts of Canada which up to the present have no plants bearing the living Canadian maple leaf.

Attractive Native Plants. Of all the numerous Northern Ontario fields of enterprise, none is so alluring to the horticulturist as that of the native fruits. It includes plums of widely different types; cherries of several classes; raspberries —red, white, and black; blackberries; dewberries; salmon-berries; currants and gooseberries of several species; two types of strawberries; three different amelanchiers: three different viburnums; red elderberry; red hawthorn; wild grape; blueberries; cranberries.

Two types of plums of outstanding merit were obtained. One is nearly perfectly spherical, 1¼ in. in diameter, dark red in color, and one dozen fruits weighed 6.6 ounces. The other was somewhat oblong, having dimensions of 1 in. by 1 in. by 1 1-16 in.: the skin was a rich yellow marked with longitudinal lines of bright red dots, and one dozen fruits weighed 4.8 ounces. Both of these were comparatively free of astringent qualities and had thin, tender skins.

Red or pin cherries, measuring 7-16 in. in diameter, were picked off healthy vigorous trees. Choke cherries of even larger size were quite common, some having a diameter of 9-16 in.

There is wide variation in native raspberries. Some are quite as large as the

average fruit grown on normal raspberry canes in the garden, and they possess high flavor.

The native fruits command the deepest interest and there is urgent need of wide work being done with them.

The landscape gardener finds awaiting him, nature's cordial invitation to partake of her treasures from hill, valley, shore and plain. Vines, shrubs and trees of considerable ornamental value possess the unexploited wilds of Northern Ontario. These three classes of plants are each well represented in the ranks of both coniferous and deciduous woods.

Among those already observed are: Virginia creeper, purple clematis, and white clematis, bittersweet, climbing honeysuckle, creeping juniper, and bearberry, willow-leaved spiraea, hazel-nut, beaked hazel-nut, alder-leaved rhamnus, alder, red osier dogwood, green-barked dogwood, several kinds of bush honeysuckles, willows, aspen, balm of gilead, yellow, white, and dwarf birch, sugar, silver, red, mountain, and striped maples, green, and black ash, mossy-cup oak, white elm, hornbeam, beech, butternut, basswood, mountain ash, sumach. Canadian yew, balsam fir, white, and jack pines, white, red, and black spruces, white cedar, and tamarac.

Several of the native fruit plants, listed above, are distinctly ornamental in bloom, in fruit, in color of bark and in shapeliness of tree.

THE FUTURE

A few dwarf fruit trees, apple, plum, pear and cherry, were purchased in the spring and planted in wooden pails. Many more will be obtained in 1918 as they will form the foundation for the breeding work done with this class of fruits. The seedlings resulting will be distributed throughout the different districts of New Ontario.

Bush and cane fruits and strawberries find these regions generally congenial They will be propagated for general distribution as rapidly as possible.

Varieties of tree-fruits which are proving satisfactory are being propagated by root-grafting and will be furnished to experimenters and rural home-makers.

Vegetable seed from selected strains will be grown with a view of giving farmers types especially suitable for their climate and season. And, after the merit of the vegetables is established, it is hoped that the growers will raise their own supplies of seed.

A spacious area with auspicious exposure, on the Industrial Farm, is being placed at the disposal of those engaged at the Plant Breeding Station for the purpose of doing demonstration work with ornamentals. An extensive system of driveways will be worked out. This will afford opportunity of showing up the virtues of native shrubs and trees as well as exhibiting the best there is in hardy exotic stuff, such as lilacs, honeysuckles, Russian olive, viburnums, willows, conifers, etc. A perennial border will be established in a nook sheltered by the trees of the driveway. Lawns, arbors, a pond with a rockery, and a plantation of hardy roses will be worked into the scheme.

Plantations of the different native fruits of promise, Saskatoon-berry, high-bush cranberry, red and choke cherries, plum, grape, and small fruits will be planted. Thus will it be convenient to closely observe the effect wrought by cultivation. "Excess of food tends to variation," and it is hoped that valuable types may be worked up.

Experiments and demonstrations will be made in plant propagation: plant

protection—in both growing and dormant stages; and in the storage of roots and vegetables. Wide tests will be made as to the usefulness of native crataegus and amelanchier as stocks upon which to graft pome fruits. Variety tests with vegetables, fruits and ornamentals will be continued and extended. Close observation and careful selection, which have accomplished such wonderful advances at other stations will be an emphasized branch of all work connected with seed-production.

The staff at the Northern Ontario Plant Breeding Station will always be pleased to help in whatever way possible, those making endeavors in Northern Ontario horticulture. Any fruits, plants, etc., of more than common excellence, and reports on unique successes with plant culture, sent to this Station, will be deeply appreciated.

CO-OPERATION AND MARKETS BRANCH

At the last session of the Ontario Legislature *The Ontario Companies Act* was revised making provision for the incorporation of Co-operative Companies and Associations as such. Previously a loose interpretation of the word was prevalent and many companies formed with the word "co-operative" as part of the trade name, which in fact were not co-operative. The Act as now written defines a co-operative company or association and provides a penalty for the misuse of the word, thus protecting *bona fide* co-operative organizations. The Act also provides that capital may be raised by means of "Capital Notes" as well as shares and gives these capital notes the same legal status as shares.

All applicants for incorporation under the co-operative part of the Act are required to submit proposed by-laws, or revision of by-laws, in order to determine whether the company conforms to the co-operative part of the Act or not. The by-laws of co-operative associations are therefore laid before the Branch and afford

Auto. excursion of Farmers' Club, studying crops far and near.

an opportunity of offering suggestions as to the general by-laws of the company in order to assist in the more business-like basis of organization. Difficulties of co-operative associations have proven the necessity of a proper basis of organization and to this end a standard set of by-laws has been issued which is used as a basis for framing the by-laws of individual associations. In almost all cases the standard set is varied in minor details to conform to the local needs, but the association using such by-laws are more or less uniform. This uniformity facilitates the co-operation of the local associations among themselves and leads to larger co-operative business organizations.

Two of these larger organizations have already been formed. In Lambton County there are about 45 Farmers' Clubs. The larger proportion of these clubs have united to form The Lambton County Co-operative Association, with the clubs as local units, and incorporated as a non-share company, raising capital by means of capital notes. At present the company has a membership of 551:

capital notes to the amount of $13,775.00. So far the bulk of the business, amounting to some $75,000.00 during the year, has been in the purchase of supplies. A start, however, has been made in marketing, and the number of shipments of hogs have been made and other lines of marketing are in preparation.

A second county organization is the Leeds Co-operative Association. This county used its Egg Circles as a basis for the county organization. These have been doing a successful business for a number of years, the one at Lansdowne especially, marketing large quantities of eggs and poultry, as well as maintaining a large fattening station for the preparation of birds for the market. The county organization has now branched out into the marketing of live stock and the purchase of supplies co-operatively.

In Brant County there is also a strong organization known as the Brant Farmers' Co-operative Company, Limited, authorized capital, $40,000, which covers a wider field than that usually covered by a club, has erected a warehouse, and is enlarging its operations as occasion warrants.

The subject is under consideration in other counties, and the tendency seems to be in the direction of larger and more permanent organizations, using the local clubs or other small local organizations as the units.

From the passing of the revision to *The Ontario Companies Act* to October 31st, 25 co-operative companies or associations have been incorporated. This does not include a number of incorporations which do not include the word "co-operative" in the trade name, but which are more or less co-operative, or are at least rural organizations carrying on business. As farmers' meetings for such purposes are not usually held during the summer months it is anticipated that during the winter a considerable number of organizations at present doing business as unincorporated associations will become incorporated under the Act.

Among the corporations so far incorporated are included:—

Beachville Co-operative Association, Oxford County, formerly a Farmers' Club.
Burgessville Farmers' Co-operative Club, Oxford County.
Charlesville Co-operative Company.
Clarence Creek Farmers' Co-operative Association.
The Co-operative De Rockland, Ltd.
The Co-operative Supply Co., Ltd.
Domville Co-operative Co.
Garden of Canada Co-operative Association.
Howtry Co-operative Association.
Kenora District Co-operative Clover Seed Growers' Association, forming as a co-operative association, selling clover seed, is now supplied with capital to purchase its own cleaning outfit, etc.
Leeds Farmers' Co-operative Association, Ltd.
Luton Farmers' Co-operative Club.
Progressive Farmers' Co-operative Club.
Richmond Farmers' Co-operative Club.
Sudbury Co-operative Creamery Co., Ltd.
South Fredericksburg Co-operative Association.

A number of other incorporations of note are:—

Farmers' Milling Co., Ltd., Wellandport, capital, $40.000.
Farmers' Union Milling Co., Ltd., Port Perry, capital, $60,000.
Richmond Hill Farmers' Association, Ltd., capital $40.000.
Slate River Valley Association, Ltd., capital, $10,000.

FARMERS' CLUBS

Between 300 and 400 Farmers' Clubs are established in the Province. The most of these have come into existence only during the last five years, and seventy-

five per cent. of these have been doing business in a greater or less degree during their history.

FRUIT ASSOCIATIONS

During the last three years the Fruit Associations have been laboring under difficulties due to poor crops and to market conditions, especially with regard to export market. This has resulted in a number of the smaller organizations discontinuing. The Ontario Co-operative Fruit Growers also, a central company for some 20 locals, did not operate during the last year. Those fruit associations, however, which are in districts where fruit growing is the main industry, such as the Niagara District, have continued and in some instances increased their business. Most of such associations have been incorporated for a number of years.

Following the plan as outlined last year for mobilizing the marketing of fruit of the whole Niagara District under a central company, a meeting was called at Grimsby, to decide as to the putting such a company in operation. After thorough canvass of the situation the meeting decided not to attempt centralized marketing of the 1917 crop, but to defer action for a year.

Two co-operative associations in the Leamington District, doing a similar business in the marketing of early vegetables and fruit, united their forces during the year and so operate as the Erie Co-operative Company, Limited, under one manager.

WOOL

The co-operative marketing of wool by the Ontario Sheep Breeders' Association will be noted under the Live Stock Department. Two associations in Manitoulin Island did not market their wool through this medium but continued as in previous years to market on a similar graded basis. Each of these associations marketed some 18,000 pounds of wool valued at $10,000, and at prices slightly under those realized by growers shipping through the Ontario Sheep Breeders' Association.

EGG CIRCLES

Egg Circles have continued operations; six new Circles being added to the list during the year. The total annual business of all Circles amounts to $250,000.

EXCHANGE OF PRODUCTS

The Branch has continued to be a medium through which interchange of products between farmers' organizations has taken place. Organizations also have been supplied, where desired, with names of firms handling various products, and assistance has been given in locating a market in many instances. Lists of farmers' organizations also have been supplied where such information would be of benefit. An instance in illustration was the marketing of over 7,000 baskets of blueberries from a farm in New Ontario direct to Farmers' Clubs and Women's Institutes over the Province, with entire satisfaction to both parties.

LIVE STOCK

An increasing interest and progress is manifest in the matter of co-operative live stock marketing. There are at the present time 10 Pure-bred Live Stock Associations, which hold annual sales of pure-bred stock.

Co-operative live stock shipping to central market is carried on by about 35 organizations. Most of these are Farmers' Clubs; other organizations carry on

the marketing of live stock as part of the work of the association; for instance, the Manitoulin Marketing Association, besides marketing wool, ship large quantities of lambs and cattle. The manager does not always accompany shipments to market, but occasionally does so, and if the market appears to be unfavorable, he reships to another market.

Quite a number of clubs ship direct to a packing house, while others send their loads to the market to be sold by one of the commission firms on the market. One or two commission firms on the market make a specialty of handling such shipments.

The amount of live stock shipped co-operatively by the local associations varies greatly, ranging from a few thousand dollars up to $100,000. The total for the 35 organizations would amount to approximately $900,000 during the last year, and indications would point to a large extension of co-operative live stock shipping in the near future.

NORTHERN ONTARIO

During the year co-operative associations in the districts of Sudbury, Thunder Bay, Kenora, Rainy River, Algoma and Manitoulin Island were visited by the Director of this Branch with a view of ascertaining the needs from a co-operative standpoint.

At the present time the associations conducted by farmers in these districts include:—

Sudbury Co-operative Creamery Co.
Verner Farmers' Co-operative Society, dealing in hay, grain, potatoes and live stock.
A number of Peoples' Banks, both in Sudbury and Algoma Districts.
A few co-operative stores.
Thunder Bay Co-operative Marketing Association, Fort William and Port Arthur.
Slate River Valley Milk Co., Port Arthur.
White Fish Valley Butter & Cheese Association, Hymers.
Kenora District Co-operative Clover Seed Growers' Association.
Rainy River Potato Growers' Association, Emo.
Emo Cheese Association, Emo.
La Vallee Creamery, La Vallee.
Manitoulin Marketing Association, Gore Bay.
South Manitoulin Wool Growers' Association.
And a number in process of formation.

The conditions in Northern Ontario demanding the organization of producers for marketing purposes are apparent. The country from an agricultural standpoint is comparatively new and all sections do not possess the facilities which are available in more thickly settled Old Ontario. Farmers find it impossible to enter certain lines of farming because of lack of these facilities for manufacturing and marketing the finished product. For instance, many sections are well adapted to dairying, but with no market for milk, and no creamery or cheese factory within reach the cow population is much below what the land should carry.

Because of the newness of some of the districts also, farmers generally are more isolated than in Old Ontario and information as to markets and market conditions are not quickly available to individual farmers. This partial isolation also tends to prevent a uniformity in the quality of farm products to a larger degree than in a thickly settled district. Each farmer in the newer sections, with but a portion of his holding under cultivation, can produce but comparatively small quantities of the various farm products and it is more difficult to market these small quantities individually.

These and other conditions show the necessity of giving serious consideration to the marketing problems of the settlers, in making their farming operations in a new country successful. The settlers themselves realize this necessity, as the co-operative associations already established or attempted, testify. In spite of the greater need of marketing organizations, the difficulties of establishing such in New Ontario are, in some cases, greater than in Old Ontario. Many of the settlers started farming in New Ontario with limited capital and in some cases, limited experience in farming. Such settlers need all, or more than all, their

Tapping the maple forest—a particularly important industry at this time.

resources in carrying on their actual farm operations, a condition recognized by the Government in making loans to individuals farmers. Generally speaking, therefore, the farmers lack additional finances and necessary business experience to invest in a marketing association.

As previously intimated, the farmers of the north country generally lack capital, an essential factor in both the production and marketing end of farming. This lack of capital is important in preventing the mobilization of marketing, and Governmental loans to farmers' organizations would doubtless bring larger results than loans to individual farmers, where the difficulties of inspection of the proper use of such funds is greater, and where the chances of loss are more numerous. Loans to associations can be surrounded with more safeguards and the resulting benefits spread over a larger field.

VEGETABLE SPECIALIST

In the interests of the vegetable industry educational work and demonstrations have been carried on along the lines followed in previous years. To the credit of those engaged in this industry it may be noted that no hostility was shown to the extensive backyard gardening campaign carried on, and the results showed that no injurious results followed. The men in the business were able to adjust themselves to the conditions in such a way as to prevent serious competition, while many actually benefited by the increased demand created.

One of the educational features was a series of conferences held at some thirteen different centres. These were all well attended, and practical addresses were delivered by successful growers, supplemented by motion pictures at the evening meetings. These pictures dealt with vegetable growing and were specially taken for use in this work. They were very effective and elicited much favorable comment.

Demonstrations were continued with a view to ascertaining the best methods of combating insect pests and plant diseases, matters which are becoming of ever increasing concern to the growers. It may be of interest to quote the report of the Vegetable Specialist briefly on some of the work carried on:

Cabbage Root Maggot Control. Further demonstrational work of the use of corrosive sublimate as a control of the cabbage root maggot has been carried on in the following places: Fonthill, St. Catharines, Brantford, Simcoe, London and Leamington. Over 6,000 plants were treated—four applications, one week apart commencing May 15. Again I am unable to report that the use of this material gave results similar to those reported in 1915 and again I have reason to lay this fact to the cool wet season which occurred during the egg laying period, and as a result practically no maggots were found and very few eggs were seen in any of our experimental efforts. Work which was carried on on a later crop of cabbage during hot dry weather resulted in practically an absolute control of the maggot, and in this case eggs were plentiful. I have reason to believe that our first experiments conducted in 1914 were along the right line and that this material will eventually be of benefit to the cabbage and cauliflower growers of the Province. Many vegetable growers have written to this office asking for directions how to use corrosive sublimate, and from various sources I have learned that the use of this material is spreading quite rapidly over the Province.

Onion Blight. Further experimental work was carried on in the Cataraqui district attempting to control onion blight. This is the third season we have used Bordeaux mixture, with and without stickers, once a week and oftener before and after the blight appeared on the leaves. At one time in the season it appeared that the Bordeaux mixture was doing some good, but in less than a week's time the whole patch was blighted evenly over treated and untreated rows. We have come to the conclusion that Bordeaux is of little or no use as a control for onion blight, and we hope to carry on experimental work along an entirely different line during the coming season as we consider it will be very necessary to be in a position to give some definite remedy for this disease which, during the last three or four years, has spread rapidly over many sections of the Province. We hope to use strong sulphuric acid at the rate of one part to 1,000 parts of water, or 2 ozs. to 15 gallons of water, and also a solution of formalin (40 per cent.) used at the rate of ½ pint

to 2½ gallons of water. These have been tried out to some extent already this season, but owing to unforeseen conditions, a definite result was not secured, and it is hoped that during the coming season more detailed information with regard to this solution will be available.

Black Heart of Celery. Vegetable growers in many sections of the Province have had very serious losses from a disease commonly known as black heart of celery, and so far very limited information is available as to means of control for this disease. In co-operation with Mr. W. J. Cooke, of Cataraqui, we have carried on experimental work for two seasons and have reason to believe that a solution of ½ pint of Black Leaf 40, combined with 40 gallons of Bordeaux mixture will control the tarnished plant bug which, we believe, is responsible for the first injury of the tender leaf shoot which, upon decaying, allows certain bacterial diseases to enter the plant and cause a rapid decomposition of the heart of the plant. This solution, when mixed with Bordeaux and applied once a week during the regular spraying for celery blight, has practically controlled both blight and black heart. While we are not in a position to state definitely that we have a remedy for black heart in celery, we have every hopes that after another season's work with this solution we can carry this remedy into many parts of the Province and demonstrate its use and thus prevent considerable loss to celery growers.

Dust Mixtures. In my report last year some mention was made of experimental work with regard to the use of dust mixtures in the prevention of fungus diseases and insect pests on vegetable crops. This year dust mixtures were used on a larger scale as follows:

Lime sulphur dust and arsenate of lead in dust form were used on potatoes for the control of late blight and potato beetles. The dust was applied on seventy rows of potatoes, each row being forty rods long. We cannot state definitely that the blight was controlled in the district where this experiment was carried on as very little blight was seen this summer, but the potatoes from the dusted rows were cleaner, larger, and, as a result, the grower had a larger yield per acre, and no other reason can be given for this than that the dust had some effect on the growth of the vine which enabled it to produce tubers of extra large size. Our work in the control of the potato beetle was more successful, and it was found that if the dust was applied to the plant either before or while the beetles were small they could be controlled with very little trouble, one application of dust a week being sufficient. The dust used for this purpose was composed of 85 per cent. sulphur and 15 per cent. arsenate of lead, which cost about $8.00 per 100 lbs. One hundred pounds of this mixture was found sufficient to cover 8 acres of potatoes. The value of dusting operations as compared to liquid spraying is largely the ease by applying the dust, the saving of time and labor, with possibly a saving of cost of material. A power duster was used by Mr. Thos. Delworth of Weston. who dusted a patch of two acres of celery commencing in July and continuing for twelve weeks, in all about 200 lbs. of dust was used. At this rate 8 lbs. of dust were used for one acre of celery at one application. The material used for dusting celery was composed of 90 per cent. sulphur and 10 per cent. filler. and cost $4.50 a hundred pounds. The results indicate that in dust mixtures we have found a material which may be easily applied and which will give satisfactory results at a comparatively low cost. Further work on this material during the coming season. we hope. will give us some indication as to the relative cost between dust mixtures and liquid sprays on other vegetable crops. At the present time we feel justified in recommending the use of dust mixtures in the control of celery blight.

Onion Maggot. Vegetable growers in many sections of the Province have complained of trouble in controlling the onion maggot, and an attempt was made during the past season to control this maggot by using 1 lb. of hellebore powder mixed in 40 gallons of water. This solution was sprayed along the base of the onions with a watering can with the rose attached. Check rows in the infested part of the patch were unsprayed and applications on the experimental plot were made once a week for three weeks. Our results, however, were negative owing again to other factors exerting some influence in lessening the attack of the maggot. Further work next year with other materials will, we hope, give us results of a very useful nature.

Celery Blight. No new demonstrational patches of celery were secured this year for the purpose of demonstrating the use of Bordeaux mixture as a preventive of celery blight. Visits were made to those growers with whom we had worked in previous seasons and it was found that these growers were continuing the spraying of celery, and that in quite a number of cases several celery growers in their vicinity had adopted this method of preventing any serious loss through celery blight. Experiments were also conducted with the use of formalin at the rate of ¼ pint of formalin in 2½ gallons of water. This mixture was applied after the blight had appeared and we considered it advisable to secure, if possible, any means of combating the disease of infecting patches. The formalin treatment from our experiments this season is not a satisfactory means of controlling blight once it has started on a celery patch.

Experiments have also been commenced in connection with soil treatment which really amounts to a partial sterilization of the soil as recommended by some of the leading authorities. Various chemicals are being used in the hopes that some method will be found of controlling diseases by attempting to keep the soil in a perfectly healthy condition rather than having it unbalanced. These experiments are being carried on in various greenhouses in the Province, and during the coming season it is hoped to continue them in cold frames, hot beds and on small plots of some vegetable garden.

MONTEITH DEMONSTRATION FARM

The work of this institution has been materially affected during the past year by the development of the Government's plans for the training of returned soldiers who desired to settle in New Ontario. As a part of this policy it was decided that it would be desirable to have the men spend a few months at Monteith to receive lectures and practical training on all phases of farm operations, land clearing, logging, burning, and other phases of pioneer life. Accordingly, temporary buildings were erected pending more permanent structures. The first class started in early in June, and since that time sixty men have passed through the course. It is of course intended that this shall be a weeding out process, but it may be noted that the majority decided to go on and take up land at the Kapuskasing Colony Farm.

As regards the farm crops, the season was very unfavorable. A very late spring was followed by a cool, dull summer and the results were accordingly disappointing. The hay crop was, however, one of the best on record, averaging over two tons per acre.

Special attention is being devoted to live stock, and some excellent individuals in horses, cattle, sheep and swine are now to be found in the barns. In this connection it is of interest to quote the following from the report of the Superintendent:

> The winter feeding of stock is one of the big problems confronting the stockmen and is regarded by some as more difficult in New Ontario than in the older part of the Province. The production of succulent feed is a necessity for best winter feeding. In Old Ontario, corn is largely used for this purpose, along with roots—turnips, mangels, etc. Corn cannot be successfully grown in the Clay Belt for ensilage, but the farm has had some most satisfactory results in growing and ensilaging a mixture of oats, peas and vetches. During the past year a yield of 10 tons of green fodder per acre was produced. Seeding was done during the first week in June on a manured clay loam. Germination was good and growth rapid. The crop was cut during the first week in October, was put in the silo and is coming out in first-class shape. It looks as if O.P.V. will prove to be a good crop for silo purposes. Generally, turnips can be successfully grown and field carrots can also be grown to good advantage. Abnormal labor conditions prevailing at the present time naturally add to the cost of producing these crops, but of course all farmers are confronted with the same problem to-day.

For some time past the value of tile drainage in New Ontario has been much discussed, and the following experience of the Farm as reported by the Superintendent is of value as far as the Temiskaming District is concerned at least:

> During the summer of 1914, considerable tile draining was done on the farm. Previous to 1914 a number of drains were put in. They were put in at different depths from 2.5 to 3 feet deep, also at different widths from 30 to 50 feet. The drains put in in 1914 were placed 3 feet deep and 60 feet apart. This work has been watched with considerable interest for the purpose of determining what results would be. The drains have taken large amounts of surplus water out of the soil and have worked as well as could be wished for in that respect. The former Superintendent estimated that as high as 2,000 barrels per day was carried off by one drain. The other drains worked equally as well. The natural sequence to this was that the drained land would seed earlier and give better results than the undrained land. To date, this has not proven to be the case. In 1916, a grain crop was produced on the largest plot and in 1917 roots were grown on it. No difference has yet been evident between the drained and undrained land; ploughing, spring cultivation, seeding and yields being the same over the entire field, drained and undrained alike. Such a result naturally demands explanation because of the fact that in most cases tile draining materially assists in earlier cultivation and better yields.

The subsoil of the Clay Belt is laid down in layers (stratified) of from ⅛ to ½ inches in thickness, alternating dark and light in color. Immediately between the top soil and that already described is a layer, white in color, varying in width from four to eight inches and in depth from the surface of 0 to 8 and 10 inches. Where the top soil or humus is completely burned off this layer comes right to the surface. It is most desirable that it be broken up and disintegrated; deep fall ploughing and the application of manure, particularly long, strawy manure, ploughing down clover and subsoiling are methods to be used in bringing about this result. Once this is done and good surface drainage provided, the peculiarity of the subsoil seems to take care of all unnecessary water. It would seem that it filters away between the layers of subsoil. Judging from results to date the farm cannot recommend settlers to tile drain where good surface drainage can be provided.

DISTRICT REPRESENTATIVES

The words opportunity, progress and activity best describe the records of the District Representatives during the past year. Owing to the abnormal conditions which prevailed emergency problems suddenly and unexpectedly arose which greatly increased the work of the District Representatives. The services of these agricultural specialists were never in such great demand. The work naturally divides itself into two main branches: (1) Office work in the way of attending of problems referred the District Representative by personal visit, letters and telephone, the preparation of addresses, articles, reports, the compiling and recording of information and the general planning of work. (2) Outside or field work in the way of demonstrations, experiments, drainage surveys, competitions, organizations and general education.

General display in a school fair tent.

The District Representatives have been working without regular assistants, with the exception of in some of the larger counties where undergraduates have been available.

New offices were established during the year in Lincoln and Wellington Counties at St. Catharines and Arthur, respectively. This now makes a total of forty-six offices in as many counties of the Province.

FARM TRACTORS

One of the new and important responsibilities of these men during the year has been the supervision of the tractors purchased by the Government and placed at the disposal of the farmers. In all 129 tractors were purchased and used in all

sections of the Province. The object was twofold, 1st as an aid to increase production and 2nd to demonstrate the practicability and feasibility of the farm tractor for the average farmer. The tractors were operated under the supervision of the District Representatives. Each tractor was equipped with a three furrow 10 in. or 12 in. bottom plough and in a number of cases also with a double action disc harrow.

The following sizes were in use: 8-16; 9-18; 10-18; 10-20; 11-22; 12-24; 12-25, and 15-25.

The first tractor commenced operations on the 24th of April and others were purchased from time to time through the season as the demand to cope with the situation grew. The majority of the tractors were not delivered until some time in August and September, in fact a few tractors were only able to do two weeks work owing to the great difficulty of getting delivery.

I might mention that the farmer was charged 35c. per hour up to July 1st and 45c. per hour thereafter for work done with the tractor while actually at work on his farm. In addition the farmer paid for gasoline and kerosine and all lubricating oils and boarded the mechanic. The Department paid the operator and kept the machine in good repair.

On this basis the cost to the farmer per acre for ploughing varied from $1.02 to $3.00, depending on conditions. All told approximately 20,000 acres were ploughed, 75 per cent. of which would not have otherwise been ploughed.

The difficulties encountered with the operation of farm tractors may be summarized as follows: Loss of time due to wet weather, soft ground, steep hills, stoney ground, quicksand subsoil, small fields, hard ground, engine troubles, breakdown, delays for repairs and incompetent operators.

In so far as we have been able to determine from the manufacturing companies handling tractors, there were about 300 tractors sold during the past year. The farmers being alive to the present acute labor situation and the necessity for increased production of foodstuffs are doing their utmost to meet the problem by motorized agriculture.

RURAL SCHOOL FAIRS

The Rural School Fair tried out in Waterloo County, in the year 1909, and adopted as a general policy of the Department in 1912 has grown year by year. In 1917 there were no less than 302 School Fairs in the Province. Some idea of the magnitude of the movement is shown by the following figures:

—	1915	1916	1917
Number of Fairs held	234	275	302
" Schools included	2,291	2,620	2,825
" Children taking part	48,386	60,262	68,862
Attendance of children at fairs	72,860	83,029	86,121
" of adults "	84,406	95,217	82,077
Total attendance	157,266	178,246	168,198
Number of entries	116,236	113,263	106,570
" home plots	51,243	55,947	59,329

New work for the "old bus line"—taking children to the school fair.

Poultry exhibit at a school fair.

The far-reaching influence of the work is indicated by the distribution of seed for the use of the children participating in the fairs:

Barley	O.A.C. No. 21	64 bushels.
Oats	O.A.C. No. 72	138 bushels.
	O.A.C. No. 3	
	Orloff	
	Abundance	
	Industrial	
	Banner	
Wheat	Marquis	23 bushels
	Common Emmer	
Sweet Corn	Golden Bantam	26 bushels, shelled.
Field Corn	Golden Glow	43½ bushels on the cob.
	Salzer's North Dakota	
	Bailey	
	White Cap	
	Wisconsin, No. 7	
	Longfellow	
	Compton's Early	
Field Peas	Arthur	580 lbs.
	Early Britain	
Potatoes	Davies' Warrior	1,211 bushels.
	Extra Early Eureka	
	Green Mountain	
	Empire State	
	Delaware	
	Irish Cobbler	
	Carmen	
	Dooley	
	White Star	
	Canadian Beauty	
Turnips	Purple Top Swede	3,695 packages.
	Carter's Invicta	
	Garton's Keepwell	
	Good Luck	
	Garton's Model	
	Hartley Rouge Top	
	Kangaroo Swede	
Mangels	Yellow Leviathan	5,850 packages.
	Bruce's Giant	
	Our Ideal	
	Yellow Intermediate	
	Mammoth Long Red	
Beets	Detroit Dark Red	6,430 "
Carrots	Chantenay	6,865 "
Parsnips	Hollow Crown	2,840 "
Asters	Giant Comet	9,110 "
Sweet Peas	Giant Spencer	4,180 "
Phlox	Drummond	1,395 "

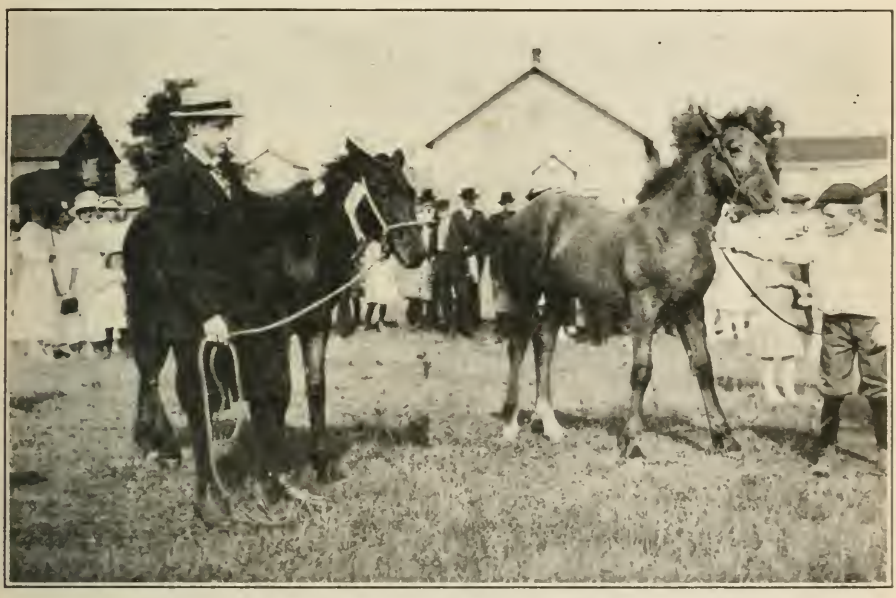
The grains were distributed in 1 lb. packages, potatoes in 5 lb. bags, corn in packages of 160 kernels, and other seeds were put up in small sealed packages, sufficient to plant a plot 10 feet x 18 feet.

It is very desirable to distribute the very best seed obtainable. District Representatives have been shown whole fields of grain and potatoes during the past few years which had as their origin the small package of seed distributed to the pupils of the schools during the past two or three years. The value, therefore, of the School Fair Work in the distribution of pure seed through the County cannot be estimated.

The number of eggs of a bred-to-lay strain of utility breeds of poultry distributed during the past three years may be summarized as follows:

—	1915	1916	1917
		doz.	doz.
Barred Plymouth Rocks	Not classified	7,357	8,940
Rhode Island Reds	according to	406	293
White Wyandottes	breeds	295	50
Totals	6,868 doz.	8,058	9,283

The general policy of distribution has been confined almost entirely to pupils attending the rural schools. In districts where a rural school fair has been organized three settings of eggs were allowed each single-roomed school. A two-roomed school was treated as two separate units for school fair purposes.



A colt is always a favorite with a boy.

A nominal charge of 25c. per setting was made, the money thus collected being placed to the credit of the rural school fair association to be used as prize money. All other pupils had the privilege of taking a package of seeds of some crop for a home garden plot. In addition to their crop these pupils had the opportunity of taking a setting of eggs at the cost price of 60c. Thus in a school fair district composed of ten schools there would be 30 dozen settings distributed at 25c. per setting and perhaps from 1 to 3 additional settings per school at the cost price of 60c. each. Let us say for illustration that 40 dozen were distributed to the pupils in this district. If 60 per cent. of these eggs hatched and the chickens attained maturity there would be 288 chickens alive at school fair time in September. We are quite safe in saying that for every pullet hatched there is also a cockerel reared.

which would result in an average of 144 pullets in the one school fair district of ten schools. Assuming that the above method of calculation is fair we would have approximately 33,448 pullets of the special bred-to-lay strain from the 9,283 dozen eggs distributed to the pupils of the rural schools in Ontario, each doing her bit to assist in the campaign of "Greater Egg Production for 1918." These bred-to-lay chickens have a great influence in the improvement of the poultry industry in the Province. In addition a great interest is aroused amongst the pupils, and parents also, in poultry raising on the farms.

These eggs for hatching have in the past been obtained very largely through the Poultry Department of the Ontario Agricultural College, Guelph. During the past two or three years, however, the District Representatives have established poultry breeding stations in their respective counties and practically all the eggs distributed in 1917 were from this source. The District Representative usually arranges for a breeding station sometime in the fall by selecting some young farmer who is particularly interested in poultry and who will give special care to the poultry flock. The pullets are specially selected by the District Representative, who arranges to procure cockerels from a bred-to-lay strain from the O.A.C., Guelph, with which to mate up the pens. The breeding station consists of from 25-100 pullets and hens mated with from 2-7 cockerels.

Besides distributing eggs to school pupils the breeding stations are usually taxed to their utmost capacity to supply eggs for hatching to the farmers in the district.

INSPECTION OF PLOTS

In view of the unprecedented conditions which prevailed in regard to the labor problem, it was decided to discontinue an inspection of the School Fair plots, with the exception of those in newly organized Rural School Fair Districts. A special

The boy is proud of his plot from O.A.C. seed.

appeal was made to the teacher and trustees to arrange for some local assistance in the inspection and judging of the plots in their school section. In many instances, the clergy visited the plots, in some cases either the teachers or trustees made the rounds and forwarded reports to the District Representative's office, who awarded prizes for the best cared for plots in the section.

The majority of the Representatives reported that the interest of the pupils did not wane on account of the plots not being judged by someone officially representing the Department, but on the other hand, the very fact of getting the local people to undertake this work, stimulated greater interest among the parents in School Fair Work.

In spite of unfavorable conditions in many districts, the fairs were an improvement over last year, not so much in the number, as in the quality of the exhibits. Pupils are taking greater pains in the preparation of their exhibits for the fair, and where size and quantity seemed to be the rule a few years ago, we now note a marked change and quality is the outstanding feature.

Practically every organization connected with the rural communities stood behind the School Fair and rendered valuable assistance, not only financially, but in the conduct of the various special features. Let me give a few concrete examples. The Board of Agriculture donated silver cups or shields to the boy or girl securing the highest number of points at the School Fairs in the county, or to the schools whose teams won the Live Stock Judging Competitions: The Women's Institutes assisted in conducting refreshment booths in aid of the Red Cross, and undertook, in some cases, to supply judges for the girls work in baking and sewing; The Junior Farmers' Improvement Associations had complete charge of some of the Live Stock Competitions conducted at the fair; the Trustee Boards and the Township Councils were very generous in their assistance, from a financial standpoint, in making grants to enable the Rural School Fair Associations to pay their prizes.

THE RURAL SCHOOL FAIR ASSOCIATION

Special mention, of course, should be made of the Rural School Fair Association itself, which is composed of representatives from each school in the district, who were elected by ballot by their own school. The accredited delegates from each school met, formed a Rural School Fair Association, and elected officers. The

One of numerous groups of teachers who have helped to make school fairs a success.

School Fair officers met perhaps twice during the season, to discuss matters pertaining to the welfare of the Fair. Special duties were assigned each officer and director and their assistance was of untold value. The splendid business training these boys and girls received will no doubt stand them in good stead in future years.

The usual custom in years past has been for the District Representative to distribute the seeds and eggs to the schools in the spring, by motor or livery, which afforded an opportunity to give a little talk to the pupils on Agriculture. During the past season two or three Representatives undertook to distribute seeds and eggs by parcel post or express. This method of distribution worked out splendidly in spite of the fact that it was hazardous to ship eggs for hatching by parcel post. The eggs arrived in good condition, only an occasional one was broken and the hatch was quite equal to those distributed in former years.

The special features worthy of more than a passing note are the Live Stock Judging Competitions, for teams of three boys from each school, who are asked to judge two classes of live stock, generally beef or dairy cattle and heavy horses; the public speaking contests, in which from two to ten boys and girls compete; the boys and girls driving contest, which includes hitching and unhitching; the School Fair parades; physical drill under the Strathcona Trust; weed and apple naming contests; and the exhibition of calves and colts led by the boys who spent considerable time training their pet animals.

SALE OF PATRIOTIC BUTTONS

Special mention should be made of the "Children's Tag Day" at the School Fairs when patriotic buttons were sold by three girls from each school. The response in most districts has been quite generous. A total of $3,233.48 was collected and after deducting expenses amounting to $364.27, a motor bus costing $1,830.00 was purchased and donated to the Military Hospitals Commission to be used specially to convey wounded soldiers from the hospitals to the Vocational Training Classes at the University. The inscription on the plate of the motor bus bears there words: "The children of the Rural School Fairs in Ontario, Canada, organized by the Ontario Department of Agriculture, donated this car from proceeds secured from the sale of patriotic buttons at the Rural School Fairs, held in the Province, 1917." In addition the sum of $500.00 has been handed to the Soldiers' Aid Commission to relieve special cases of distress amongst returned soldiers. The balance will be used for other patriotic purposes.

SPECIAL SEED POTATO PLOT

Owing to the difficulty of procuring seed potatoes, pure, free from disease and true to variety, it was decided to establish seed potato plots in each county as a source of obtaining good seed for distribution to the pupils. It was deemed advisable to standardize the potato industry and thus do away with a lot of varieties which have been on the market for years and which have not in the past given good results.

Owing to unfavorable weather conditions and the difficulty of obtaining disease free seed to start with the majority of these seed plots proved a failure. It has been decided, however, to purchase seed for School Fairs from Northern Ontario as experiments have proved that such seed gave much greater yields than the same variety which was grown in Old Ontario. In this way it is hoped to greatly improve the potato industry.

PUBLIC SPEAKING CONTEST

It is most encouraging to note the interest which has been taken in the Public Speaking Contest, which is one of the most popular features of the fair. The boys and girls deserve every encouragement. The event gives them an excellent training and develops latent talent.

The following is a copy of a speech delivered at a school fair held during last fall and is quite typical of others:

A girl orator addressing the school fair crowd.

How the Children of Canada can help to Win the War.

Although we are living here, away from even the sound of battle, we can help fight one of the worst enemies which is confronting our troops—that is the shortage of food, which will mean, unless we do our "bit," starvation for the boys overseas. This would result in the defeat of our troops.

There are several causes for this shortage of food. The European war has caused the slaughter of a large number of the animals of Europe. In Europe, the herds have been diminished by 28,000,000 cattle, 54,000,000 sheep, and 32,000,000 hogs already. From month to month during the war, the number of food animals will become less. Even neutral countries in Europe have been decreasing their stocks owing to the difficulty in importing feeds. The gardens and fields of Europe are hopelessly ruined by the battle fields of the war. The men of Europe are engaged in a life struggle to defend their homes and ours, and have no time to raise food for man and animals. This is left for the women, boys and girls and they are bravely doing their best with what is left to them.

This war is to save our homes as well as theirs—to save us from future tyranny of Germany. Then should we not also do all in our power to help feed those who are so bravely fighting for us on the battle fields of Europe? There are fewer men in Canada now than there was before the war, so it is plain that we must help to take their place.

But how are we to do this? Can we do it by putting forth exactly the same effort as we did before the war? No! We must spend our spare time in doing some work which will help to feed our friends across the sea. If we all use our school gardens to advantage and carefully tend them throughout the summer, the vegetables raised would

be considerable and perhaps these might be sold. If each would plant some extra garden and care for it, they could do much to replace the men who have left us, as well as to feed them. A child can do much even though he be small, to help on the farm and make the shortage of men less felt. In those schools with school gardens attached, the vegetables raised might be sold, thus increasing the products and the money might be used for Red Cross purposes or to buy comforts for the soldiers.

Not only must we produce but we must use to advantage what is produced. We must use garden and orchard products when they are ready, thus saving things which will keep for winter and for shipping.

The baby show.

During the winter months we can do little toward producing food, unless we help with such farm work as tending the cattle and other chores, but we can do something toward making our soldiers more comfortable. "The scenes and happenings in 'No Man's Land' and the advance trenches during actual battle are literally horrible." Then there is the climate to contend with and the mud which is described by our Canadian poet, Mr. R. W. Service, now in khaki, in the stanza:

"It isn't the foe that we fear,
It isn't the bullets that whine,
It isn't the business career
Of a shell, or the burst of a mine;
It isn't the snipers who seek
To nip our young hopes in the bud,
No, it isn't the guns,
And it isn't the Huns—
Its the mud,
mud,
mud."

Then, is it not our duty to alleviate their sufferings? How are we to do this? If we learn to knit, we can knit socks and other things for the soldiers, so that they can have all the comforts possible under the circumstances while in the trenches, and when they come out have fresh, new socks to put on. One of the bright phases of the situation in France is the fact that only a small percentage of the men at the front are engaged in actual battle at once, and those stationed at the very front are relieved every few days. In the rest tents, just behind the battle line, there are organized

arrangements for recreation. The system of caring for the sick and dying is now developed to a scientific perfection. But, this can only be maintained, when there is money to do it. We can earn money by entertainments, sales, and in many other ways. Money donated by the people in small quantities like this is not missed; but how much it may add to the comfort of those who have so little, and who suffer so much for us. Then, if we sometimes send boxes to those whom we know at the front, it will give them great pleasure.

During these times when transportation is so difficult and so many of our best workers are gone, there are many things which it is difficult for us to get. These things we should endeavor to save to the best of our ability.

What if our soldiers should come back after the war and taunt us with, "You expected us to win the war but you left us there suffering and starving while you enjoyed yourselves over here!" Then let us plan and work as we have never worked before. So many of our best men are sacrificing their lives for their country, surely we can give up some of our time and our comforts. Thus, we can hasten the time when "Men shall beat their swords into plowshares, and their spears into pruning hooks, nation shall not lift up sword against nation, neither shall they wage war any more."

ESSAYS

Prizes are offered for essays on various subjects and the following carried off the prize at one of the school fairs:

What I Did to Help Increase Production in 1917.

In your prize list are prizes given for different essays. The one I have chosen to write on is "What I Did to Increase Production in 1917."

On April 2nd, 1917, I tried my entrance examination so as to be able to help my father on the farm for my brothers are both young. I passed my examination into the High School with honors, on April the 5th. I then commenced working on the farm. I helped my father do the chores daily. I watered the cows and horses and helped my sister milk the cows and feed the calves twice a day.

When seeding began I drove three horses on the harrows, disc, cultivator, roller and other implements. Father and I put in fifty-five acres of crop. When we finished seeding, the corn ground had to be ploughed. Father gave me a team and I ploughed seven acres and tilled the soil ready for the corn to be drilled; I also helped to work the root ground and plant the garden. After seeding was finished my father was away most of the time and I was chore girl.

We had seven acres of roots and I hoed day after day, sometimes I had help and sometimes I was alone, when the hoeing was done haying had started. I was kept busy horse-raking, driving the hay-fork and hay-loader, when I finished that the grain was ripe. I lifted sheaves from the front of the binder, shocked up grain and turned the sheaves over to dry on the other side after a rain, and the latter end I helped to haul in the oats, which we just finished last Saturday, so this is as far as I can go at the present time, and expect the fall ploughing and root pulling will be the next work and busy time.

AGRICULTURAL INSTRUCTION IN SCHOOLS

A scheme to increase the value of School Fair work has been inaugurated by the District Representative for Oxford County—the material sent out for the special course of study has been such that teachers could use to advantage and with very little extra effort on their part.

The following is a brief outline of the course of study:

To the teachers who undertake this work, a detailed course of instruction with full information is supplied. This syllabus is only an outline of the work:

September:

Weed Study, as indicated in Oxford Nature Study Lessons, Collection of Plants and Seeds. Eradication of weeds studied.

References: Comstock, Weeds of Ontario, Seed Control Act.

October:

Collection of Apples and other fruits for competition and judging. Collections of injured and imperfect fruit. Causes and remedies.

References: Supplied by Department of Agriculture, Woodstock.

November:
Poultry: How to Judge, Score Cards for Utility Birds, Score Cards for Show Birds, Egg Production, Barred Rocks.
References: Supplied by Department of Agriculture, Woodstock.

December: Farm Stock, Dairy Cow, How to Judge a Dairy Cow, Winter and Summer Care.
References: Supplied by Department of Agriculture, Woodstock.

January:
Spraying the Commercial Orchard: Time to Spray, Objects of Spray, Spraying mixtures, Biting and Sucking Insects.
References: Supplied by Department of Agriculture, Woodstock.

February:
Flower Plot: Draw a plan and mark location of the following plants in flower plot, to produce best succession of summer bloom. Care of plot.
References: Supplied by Department of Agriculture, Woodstock.

March:
Oats and Barley: Soil, Seed-time, Seed (plump, medium, light and broken), Variety (yielding property), Diseases (smut heads, control).
References: Department of Agriculture, Woodstock.

April:
Potatoes: Soil, Seed-time, Seed, Varieties, Potato Beetle Control, Blight Control.
References: Department of Agriculture, Woodstock.

May:
Silo Corn: Soil, Seed-time, Seed, Varieties.
References: Department of Agriculture, Woodstock.

June:
Work of Common and Injurious Insects: Cut Worm, Cabbage Butterfly, Potato Beetle, Aphids.
References: Comstock, Nature Study.

HOME GARDEN CONTESTS

Reports would indicate that boys and girls past the School Fair stage have shown a remarkable interest in the Home Garden Contest as conducted by the District Representative. Each contest comprises 25 gardens. All told, during the past season 55 Home Garden Contests were conducted throughout the Province with 1,375 individual gardens. The object is two-fold, first, to interest the boys and girls from 12-15 years of age in better agriculture, and, second, to encourage the farmers to pay greater attention to vegetables for home consumption.

A special folder or leaflet outlining plan of garden, showing crop arrangement and giving cultural instructions for growing garden crops was handed to each contestant. The size of the garden was 20 feet x 30 feet and the crops grown were as follows: Beans, green onions, radish, spinach, lettuce, corn, peas, onions, parsnips, carrots, tomatoes, beets, cabbage.

The District Representative arranged to inspect the gardens during the summer, awarding prizes for the best garden. Special classes for products from these gardens were arranged for in the prize lists of School and local Fall Fairs, thus encouraging industry and thrift.

COURSES IN AGRICULTURE

The special 4-6 weeks' Courses in Agriculture conducted by the District Representatives have become a very popular and important feature of agricultural extension work. These practical courses are held during the winter months at some

Sports for both boys and girls.

Feature the school fair day.

central place in the county, to which young men, farmers' sons, ranging in age from 15 to 35, attend. The average attendance would be approximately 23.

The object of these courses is not primarily to teach the boys how to farm; practical work on the farm is the best teacher. The aim is rather to make a study of the principles upon which common every day farm operations are based; to create a greater interest in farm life; to induce the young man to enquire more closely into things; to make him acquainted with new and approved ideas and to instruct him where to seek for the latest information and assistance science can give him in his farm operations.

The following is an outline of the Course of Lectures which may be considered fairly typical:

Live Stock. A study of the types and characteristics of the different breeds of farm animals. Visits will be made to local stock farms where practical work will be taken in judging cattle, horses, sheep and swine.

Feeds and Feeding. A study of the feeding value of food stuffs used on the farm; their adaptability to different classes of stock; the working out of balanced rations; care and management of farm animals.

Field Crops. A study of the principal field crops of the county with practice in judging seeds of all kinds; principles of crop improvement; rotation of crops; the results of experimental work at Guelph and Ottawa.

Dairying. Feeding, care and management of dairy cows; improvement of the dairy herd; care and handling of milk and cream; practical work in testing milk and cream; the process of butter making.

Poultry. Characteristics of the most useful breeds of farm poultry; feeding and general management; poultry houses; egg production and rearing of young chickens naturally and artificially.

Agricultural Botany. Identification and eradication of weeds and weed seeds; the Seed Control Act and its application; plant structures; the relation of plants to soil, air, light, temperature and moisture.

Insects and Fungus Diseases. Study of injurious insects of orchard, garden and field; their habits and injuries; best method of prevention. Study of fungus diseases of farm crops; rusts, smuts, blights, rots and scabs.

Sprays and Spraying. The preparation and application of sprays and solutions for treatment of seed; spraying machinery.

Soils. Study of the origin of soils; different types of soil; essential constituents, soils in relation to moisture, air, heat; methods of cultivation; the principles of tile drainage; methods of putting in a system of drains; benefits to be derived from drainage.

Manures and Fertilizers. Care and application of barnyard manure; commercial fertilizers, their nature and use.

Fruit and Vegetable Growing. The fruits suited to the district; methods of propagation, planting, pruning, cultivation, care; practical lessons in grafting and pruning; the farmers' vegetables garden; hot beds; canning crops.

Bacteriology. The study of bacteria in relation to agriculture; plant and animal disease and sanitation; bacteria in the soil, in milk, in silage, etc.

Farm Book-keeping. Farm records and accounts.

Marketing and Co-operation. The value of proper preparation and packing of farm products; how to co-operate in marketing and its value to the farmer.

Lectures are given by the District Representatives which are supplemented with practical work in the class room with testing milk, judging grains and clover seeds, identification of seeds of noxious weeds, pruning and grafting, making of Bordeaux mixture and the visiting of stock farms for practice in judging live stock.

Special lecturers have been sent out by the Department during the past three years with the object of lending variety and stimulating greater interest in the class.

A Literary Society is usually formed and the members of the class take part in debates, addresses and impromtu speeches. They receive practice in public speaking and the class usually winds up with a banquet or some form of closing exercises.

The following shows a summarized statement of the Courses in Agriculture for the past few years:

Year.	No. of courses.	Attendance.
1912.....	19	377
1913.....	16	346
1914.....	28	555
1915.....	43	1,114
1916.....	36	888
1917.....	36	839

The attendance during the past two years has not been as large owing to the scarcity of young men in the district, so many having enlisted, the shortage of labor and increased duties at home.

JUNIOR FARMERS' IMPROVEMENT ASSOCIATION

The young farmers' movement is progressing very rapidly and is one of the most important features of District Representative work. As it was felt that there should be some organization by which the young men might be held together, the boys taking the 4-6 weeks' Courses in Agriculture organized themselves into a Junior Farmers' Improvement Association, the object, briefly stated, being to create a deeper, more permanent and more intelligent interest in all that pertains to agriculture in its broadest sense.

The first organization came into being in 1914. During the past year there were 82 such organizations with a total membership of 1,521. The advantages of organizing the boys in the class are obvious. Much more effective work can be undertaken and the active organization has proven to be the means of keeping the young men interested in better agriculture.

The following is an amended copy of the Constitution:

CONSTITUTION.

..... JUNIOR FARMERS' IMPROVEMENT ASSOCIATION.

1. This Association shall be known as the .....Junior Farmers' Improvement Association.
2. The object of the Association shall be to create a deeper and more permanent interest in the agricultural life of the district;
   (*a*) By the dissemination of agricultural learning among its members leading to improved farm methods;
   (*b*) By conducting competitions, such as the Acre Profit Competition, in the production of field crops;
   (*c*) By conducting competitions such as Feeding Hogs for Profit, Dairy Profit and Baby Beef Competitions, in the production of live stock;
   (*d*) By arranging for Live Stock Judging Competitions at the Local Fall Fairs;
   (*e*) By conducting simple experiments on the farm in cow testing, commercial fertilizers, spraying, pruning and thinning, underdrainage, apiculture, poultry, etc.;
   (*f*) By the introduction of better varieties of farm crops.

3. The officers of the Association shall consist of a President, Vice-President, Secretary-Treasurer, a Committee of Management and two Auditors.
4. The Association year shall commence the first day of March of each year.
5. The Association shall hold at least two meetings each year, and, if possible, monthly meetings. The meetings shall be held at or near the place where the Course in Agriculture was conducted.
6. The membership of the Association shall be limited to those who attended the Course in Agriculture, arranged by the local Department of Agriculture. There is no age limit, but the Association is primarily for young farmers.
7. Any bona-fide farmer under 30 years of age may become an Associate Member of the Association.
8. Each member shall be notified in writing of all meetings of the Association at least five days' previous.
9. Ten members of the Association shall constitute a quorum for the transaction of business.
10. An annual membership fee of twenty-five cents shall be levied.
11. The Constitution of the Association may be amended by a majority vote at any regular meeting.

Parade at the school fair.

The meetings during the winter months partake of the nature of addresses, debates, literary, music and social. They are held monthly and semi-monthly. During the summer the Junior Farmers' Improvement Association usually hold a picnic or a garden party and conduct an automobile tour.

The members of a number of organizations have been conducting demonstrations in spraying potatoes for control of blight and treating grain for prevention of smut.

In order to keep in direct touch with the boys who have taken the Courses in Agriculture, one District Representative prepared a small leaflet entitled "Short Cuts for Increased Farm Revenues." This leaflet was run off on the duplicator and

mailed the first of each month. The following is representative of the form and nature of these leaflets:

Vol. 3 November 1, 1917. No. 1

LIVE STOCK. This is rather a trying time of year on all classes of live stock. Weather conditions are very changeable. The nights are raw and cold. Pastures have lost much of their value and make very little or no growth. Neglect of stock at this time of year will put them in a run-down condition to start the winter. This is very undesirable and takes a lot of extra feed later to overcome. It will pay to give a little extra care to the stock from now until they go into their permanent winter quarters. It can be safely said that from now on all stock should be the stable on rainy nights. Milking cows should be in very night. They will do much better. Cows should be fed a little meal. It is not necessary to give them altogether the high-priced concentrates. Have some of the home grown grains ground and mix with the bran, gluten feed, oil cake, or whatever is being fed. This will cheapen the ration and give equally good results. A little hay or ensilage as a filler can also be fed to good advantage this time of year to make up for what the cows are unable to get from the pastures. Just a little extra care in stabling and feeding now will pay big returns.

POULTRY. Winter quarters for the flock should be put in shape during the month. It is very advisable to clean out the pen thoroughly and whitewash the walls, roosts, nest boxes, etc., with a good quality whitewash to which has been added a few ounces of crude carbolic acid, zenoleum or some good disinfectant. In making up the whitewash, use fresh lime and apply while hot. A sprayer makes an excellent way of putting it on. Where this not available, a brush or old broom can be used. This will usually destroy lice, mites, etc. A good remedy to destroy these is the common lime sulphur used in spraying apple trees, at a strength of one gallon lime sulphur to four gallons water. This is very effective. It could be applied first and then whitewash if lice were very bad. In order to clean up the lice thoroughly, provide plenty of dusting boxes for the hens, fine ashes or road dust, to which has been added a little sulphur, makes an excellent dust bath to destroy lice on poultry. It is important not to neglect this if we wish to clean up all lice and mites.

Provide separate quarters for your pullets. They are the fowl from which you may expect most of your winter eggs. They do much better when away from the older fowl, besides they require heavier feeding to force early laying. The same feed given to the older birds will make them too fat. Separate out the pullets and give them plenty of feed. They require cut bone, meat scrap and feeds of that nature as well as grain to do their best. Keep plenty of water and oyster shell in the laying pen. Mark the pullets that start to lay first and use them in the breeding pen next year.

FARM MACHINERY. This should be carefully stored for the winter months. It is a good plan to oil all working parts before putting it away, this will prevent rust. Remove knives from mowers and binder, also carrier canvas from binder. Plough mould boards should be polished with a rag removing all dirt, then cover over with a good coat of grease. This will prevent rust. At the present time, considerable money is tied up in machinery on the farm and it pays to give it good care. It has often been said that more machinery rusts out on the farm than what wears out. There is no question but that care will prolong its life to a very great extent.

This circular tends to keep the Representative in touch with the young men and leads to increased correspondence with them.

The Streetsville Junior Farmers' Improvement Association in Peel County prepared a plan for regular weekly meetings during the winter months dividing the programme into three headings, Literary, Social, Agricultural and Domestic Science. The tentative programme of meetings of the Streetsville Junior Farmers' Improvement Association and the Junior Division of the Streetsville Women's Institute is as follows:

STREETSVILLE, PEEL COUNTY, WINTER 1916-17.

Date.	Kind of Meeting.	Programme.
Dec. 5	Literary	Debate.
Dec. 12	Social	Entertain W. I.
Dec. 19	Agriculture and Domestic Science	Report Junior Farmers' Improvement Association Contests, Report Garden Contest.
Dec. 26	Literary	Varied.

Date.	Kind of Meeting.	Programme.
Jan. 2	Social	Sleighride party to Brampton.
Jan. 9	Social	House party.
Jan. 16	Literary	Play—"Back to the Farm."
Jan. 23	Social	Carnival.
Jan. 30	Agriculture and Domestic Science	Report Ontario Agricultural College Courses; Home Decoration.
Feb. 6	Literary	Debate.
Feb. 13	Social	Entertainment, not definitely planned.
Feb. 20	Agriculture and Domestic Science	Educative Tableaux.
Feb. 28	Literary	Mock Trial and Mock Programme throughout.
Mar. 6	Social	Patriotic Box Social.
Mar. 13	Grand Finale	Banquet (Boys and Girls).

FARMERS' CLUBS AND DEBATE SERIES

In Waterloo County the Farmers' Clubs and Junior Farmers' Improvement Association have, during the past few years, carried to a successful issue a series of debates, the rules of which are as follows:

1. Each speaker will have twenty minutes in which to deliver his arguments. In case he exceeds this time, the same will be deducted from that of his supporter. If he does not occupy his full time, the same will be added to that of his supporter.

2. The affirmative will be allowed five minutes in which to reply, but no new material may be brought up at this time.

3. No side will be allowed to speak over forty minutes.

4. Two minutes before the time is up, the chairman shall give the speaker warning in some audible manner as well as at the end of the twenty minutes.

5. The debate will be judged on the following basis:

Matter	50
Argumentation	25
Delivery	15
Language	10
	100

6. Outside judges will be secured on application to your Township Representative on the Executive of the Board of Agriculture.

7. A club cannot win the debate series unless they have held four regular club meetings during the winter months.

The subjects debated were:

Resolved: "That Military Training should be compulsory in the Public Schools in Canada."

Resolved: "That women should receive the same salaries as men occupying similar positions."

Resolved: "That the offering of a bonus to a manufacturing industry is justified."

Resolved: "That all mining properties should be controlled and owned by the Government rather than by private individuals or companies."

Resolved: "That the Government of Canada would be carried on equally as well without the second legislative chamber."

Steps have been taken to place the Junior Farmer movement on a broader basis by organizing a Provincial Association.

Very effective work can be accomplished through the Junior Farmers' Improvement Associations and the movement should be fostered and receive every encouragement.

JUNIOR FARMERS' PLOUGHING COMPETITION

During the past two years a couple of Farmers' Clubs have been conducting a competition for the best ploughed five acres on the home farm. In one county the competition was open to any ploughman in the county and competitors were allowed to use any kind of a plough. The contest was an improvement on the county match as good ploughing was encouraged on each competitors' farm, which was an incentive to other members of the family to try to do better work. In another county entries were limited to the members of a Farmers' Club, two teams being chosen, the losing side to supply some sort of an entertainment. This brought the match right home and tested the young man's ability at regular farm work.

In several other counties a competition was conducted under the following rules:

1. This Competition shall be known as the Junior Farmers' Ploughing Competition.
2. The Competition shall be open only to members of Junior Farmers' Associations or young men under 30 years of age who have taken the special course in agriculture conducted by a District Representative.
3. There will be three classes:
   (1) In sod, single ploughs, with jointers, 5 acres in one block to be ploughed.
   (2) In stubble, single ploughs, with jointers, 5 acres in one block to be ploughed.
   (3) In stubble, two furrow ploughs, 10 acres in one block to be ploughed. Contestants to use three horses in ploughing. Strike out and finish included.
4. There must be at least five entries in each class and unless ten complete the contest, no prize will be awarded.
5. Entries close October 15th.
6. Contestants must plough per ten hour day, not less than 1¼ acres with single ploughs in sod and stubble, and 2¼ acres with twin ploughs in stubble.
7. Contesting ploughmen to have their land ploughed and ready for inspection and judging the morning of Wednesday, October 24th. Contestants should arrange to have their land ploughed as near to the time of judging as possible.
8. The judge will consider conditions for following year's crop, as well as crown, finish and general land.

The judges used the following score:

Crown	20
Straightness	15
Evenness of cut	20
Evenness of depth	20
Covering of grass and stubble	20
Finish	20
General appearance	20
Total	135

It is hoped that a goodly number of these contests will be conducted during the coming season as they are a great stimulus to better cultivation of the soil.

ACRE PROFIT COMPETITIONS

For a number of years the District Representatives have been conducting Acre Profit Competitions in various crops. These are open to young men who have taken the Four Week's Courses in Agriculture conducted by the District Representatives. The prize is a two weeks' Short Course at the Ontario Agricultural College, Guelph, transportation to Guelph and return and board and lodging while there. Where eight or more contestants finish in a competition two men are sent to Guelph.

There were thirty-two contests during the past season with different crops as follows:

10 competitions in oats.
10 competitions in potatoes.
6 competitions in corn for silage.
1 competition in corn for seed.
2 competitions in turnips.
2 competitions in mangels.
1 competition in wheat.
32 competitions in 24 counties or districts.

In estimating the cost of operation $5.00 per acre was allowed for the rent of the land, $2.00 for ploughing, 15c. per hour for manual and 10c. per hour for horse labor. A uniform price was placed on all seed used in the spring as follows:

Turnips	$0 50 per lb.
Mangels	0 35 "
Corn	0 3 "
Beans	8 50 per bus.
Potatoes	2 75 "
Wheat	2 60 "
Barley	1 60 "
Oats	1 10 "

In the grain crops the competition was conducted on the five acre basis. This was done to allow the contestant to enter the Field Crop Competitions should there be one in their district. Calculations are made on the basis of one acre.

The following is a list of the winners, giving some interesting figures as to cost of production and profits in various crops:

WINNERS IN ACRE PROFIT COMPETITIONS, 1917

OATS

(65c. per bushel).

County.	Winner.	Yield.	Cost Prod.	Profit.
		bush. lbs.	$ c.	$ c.
Simcoe	Arthur G. Tudhope, R.R. No. 1 Hawkestone.... Sandy loam, following pasture, farmed 50 years, formaldehyde, O.A.C. No. 72.	80	15 78	36 22
Brant	Russel A. Templar, Burford..... Sandy loam, following sugar beets, farmed 50 years, O.A.C. No. 72.	72	15 13	32 19
Kenora	Chas. Skone, Oxdrift ..... Clay loam, following hay, farmed 18 years, Gold Rain.	67	14 80	28 75
Norfolk	Erle Mott, O.A.C., Guelph..... Sandy loam, following alsike seed, farmed 70 years, O.A.C. No. 72.	61	14 38	25 27
Dundas	Geo. Timmins, Inkerman ..... Clay loam, following corn, farmed 50 years, White Wave.	62 12	15 21	25 25
Victoria	J. P. Wilson, Woodville ..... Clay loam, following oats, Garton's Abundance.	54	14 53	20 24
Welland	K. W. Sexsmith, Ridgeway..... Clay loam, following corn, farmed 137 years, 15 loads manure, O.A.C. No. 72.	52	14 53	19 11
York	Wilfred Maginn, Aurora..... Clay loam, following fall wheat, farmed 50 years, 20 loads manure, Ligwa.	46	12 16	17 68
Glengarry	Donald McKinnon, R.R. No. 1, Alexandria ..... Sandy loam, following hard crop, farmed 15 years, formaldehyde, Banner.	47	13 67	16 75
Lambton	Frank Burgua, Sombra ..... Clay loam, following clover, farmed 20 years, O.A.C. No. 72.	35	12 57	10 18

POTATOES

(90c. per bus.)

County.	Winner	Yield.	Cost Prod.	Profit.
		bush. lbs.	$ c.	$ c.
Manitoulin.....	Jos. Hodgson, Mindemoya..... Sandy muck, following potatoes, farmed 40 years, 8 loads manure, Irish Cobbler and Ontario Beauties, Paris green.	463	130 40	286 60
Fort William ...	Valentine Bliss, Slate River..... Sandy loam, following hay, farmed 25 years, 10 loads manure, Pingree.	376	72 80	265 60
Muskoka	Gordon Hill, Hillside..... Loam, following summer fallow, farmed 6 years 5 loads manure, Paris green and arsenate of lead, Muskoka's Pride.	364	83 05	244 55
Fort William ...	Robt. Denison, Slate River..... Sand and clay loam, following wheat, farmed 7 years, 5 loads manure, Carman.	304	58 15	215 45
Port Arthur	Wm. T. Price, Commee ..... Clay loam, following potatoes, farmed 2 years, 6 loads manure, Carmen.	327	82 30	212 00
Grenville	Arnold Goodin, Spencerville..... Heavy loam, following pasture, farmed 50 years, 16 loads manure, Paris green, White Star.	321	82 90	206 00
Port Arthur	Clair Kenny, Dorion ..... Sandy loam, following clover hay, farmed 4 years, 10 loads manure, Carman.	261	61 77	173 13
Middlesex	Frank Farrow, R.R. No. 2, Mt. Brydges..... Sandy loam, following wheat, farmed 40 years, 20 loads manure, Dooley.	231	55 55	152 35
Lanark,.....	Lindsay J. Duncan, McDonald's Corners..... Clay loam, following oats, farmed 40 years, 10 loads manure.	214	85 32	107 28
Rainy River	Fraser Ross, Devlin..... Clay loam, following wheat, farmed 21 years, 10 loads manure, Delaware.	187	63 70	104 60
Renfrew.....	D. L. Cameron, R. R. No. 2, Pembroke ..... Clay loam, following pasture, farmed 50 years, 12 loads manure, Paris green, Green Mountain.	165	61 25	87 25
Norfolk.....	Elmo L. Riddle, R.R. No. 1, Wilsonville..... Sandy loam, following wheat, farmed 15 years, 7 loads manure, Paris green, Mills Pride.	126	44 81	68 59

CORN FOR SILAGE

($3.75 per ton)

County.	Winner.	Yield.	Cost Prod.	Profit.
		tons. lbs.	$ c.	$ c.
York	Wilfred Holdon, H.R. No. 2, Markham Dark clay, following pasture, farmed a long time, Bailey.	26	13 58	81 52
Grey	W. T. Riddell, Annan Clay loam, following Alfalfa, farmed 50 years, 6 loads manure, Wisconsin No. 7.	26	18 85	78 65
Simcoe	Ernest Smith, Smithdale Light loam, following mixed hay, farmed 40 years: 17 loads manure, Wisconsin No. 7.	26	23 01	74 19
Middlesex	Edmund Wark, R.R. No. 1, Strathroy Clay loam, following pasture, farmed 80 years, White Cap Yellow Dent.	20¼	14 91	61 03
Peterborough	W. J. Barrie, R.R. No. 2, Norwood Black clay loam, following hay, farmed 48 years, 4 loads manure, Improved Leaming..	18	17 28	51 03
Peterborough	Earl Barrie, R.R. No. 1, Birdsalls Sandy loam, following pasture, farmed for first time, Wisconsin No. 7.	15	12 22	45 53
Bruce	Eldon Nicholson, Tara Clay loam, following fall wheat, farmed 50 years, 16 loads manure, Bailey's.	14	18 55	35 26

CORN FOR SEED

($1.75 per bus,)

		bush. lbs.	$ c.	$ c.
Lambton	Stewart MacDonald, R.R. No. 2, Port Lambton. Sandy loam, following hay, farmed 50 years, Bailey.	26	21 67	24 40

TURNIPS

(15c. per bush.)

		bush. lbs.	$ c.	$ c.
Brant	John Edgar, R.R. No. 3, Paris Clay loam, following wheat, farmed 50 years, 12 loads manure, 20th Century.	867	22 94	107 11
Wentworth	Jas. Beaton, R.R. No. 2, Hamilton Sandy, following potatoes, farmed 50 years, 8 loads manure, Hall's Wesberry.	560	21 80	62 20

MANGELS.

15c. per bushel.

County.	Winner.	Yield.	Cost Prod.	Profit.
		bush. lbs.	$ c.	$ c.
Durham	Clarence R. Lovekins, Newcastle ..... Clay loam, following corn, farmed 125 years, 15 loads manure, Yellow Leviathan.	1,403	32 10	178 35
Bruce	Jas. G. Armstrong, Formosa ..... Clay loam, following mangels, farmed 51 years, 10 loads manure, Bruce's Giant White.	531	25 57	54 08

WHEAT

($2.15 per bush.)

		bush. lbs.	$ c.	$ c.
Renfrew	John D. MacLaren, R.R. No. 2, Arnprior..... Black clay, following ensilage corn, farmed 41 years, Marquis.	34	18 20	54 90

FEEDING HOGS FOR PROFIT COMPETITIONS

The object of the Feeding Hogs for Profit Competition is to encourage young men to raise and feed hogs by keeping accurate records of the feed they consume and to market their hogs when they have attained the proper weight for bacon purposes. During the past season the District Representatives conducted eleven Feeding Hogs for Profit Competitions. Many more contests were started but owing to the acute labor situation these were dropped. The contests were open to young men who had taken the Course in Agriculture, the prize being a two weeks' Course in Agriculture at the Ontario Agricultural College, Guelph, and transportation and board while there.

The hogs were selected when six weeks old, at which time the record work began. A value of $4.00 was placed on the young pigs at this age. Contestants were to feed three hogs though a fourth was allowed to be fed and used as a spare in case of accident or disease. They were fed until twenty-two weeks of age, the records of feed being kept every week. In some cases hogs were weighed every week in order to note the gain.

Feed was valued as follows:

Ground Oats	$28 00	per ton
" Barley	40 00	"
" Peas	60 00	"
" Rye	38 00	"
" Wheat	50 00	"
" Corn	35 00	"
Corn on the cob	30 00	"
Bran	30 00	"
Low-grade Flour or Red Dog	36 00	"
Shorts or Middlings	30 00	"
Tankage	50 00	"
Oil Cake	50 00	"
Grain Feed	2 00	"
Skim Milk	3 00	"
Butter Milk	5 00	"
Whey	3 00	"
Pasture	1 00	per hog

The profit was estimated by valuing hogs, live weight, fed and watered, at 17½c. per lb.

In awarding the prizes 50 per cent. was allowed for highest net profit and 50 per cent. for type and finish which was arrived at by the use of the bacon hog score card.

The following are the winners:

WINNERS IN FEEDING HOGS FOR PROFIT COMPETITIONS, 1917

County.	Winner.	Breed	Average cost production.	Average Value.	Average Profit.
			$ c.	$ c.	$ c.
Manitoulin...	Walter Galbraith, Spring Bay..	Yorkshire	10 48¾	36 05	25 56¼
Kenora	Jas. Hutchison, Dryden	Yorkshire	16 56	42 00	25 44
Waterloo	Roland E. Maeder, Ayr.....	Yorkshire	15 87	40 42	24 55
Oxford	Harry L. Kaufman, R.R. No. 4, Bright.....	Yorkshire	17 12	39 81	22 69
Grenville	Willard K. Whitley, Spencerville	Yorkshire	13 66	36 10	22 44
Carleton	Orval Daley, North Gower ,....	Yorkshire	9 47	30 98	21 51
Lanark	Harry S. McArton, R.R. No. 4, Almonte	Yorkshire	12 51	33 19	20 68
Lennox & Addington.	Clarence M. Spafford, Napanee.	Chester White and Yorkshire	12 32	32 85	20 53
Grenville	Floyd Barber, Merrickville	Yorkshire	12 99	33 42	20 43
Peel.....	Harvey Speers, R.R. No. 3, Caledon.....	Yorkshire	9 73	28 00	18 27
Port Arthur.	C. R. Bingham, Murillo	Cross Breed	9 09¼	24 26	15 17
Simcoe	W. H. Somerville, Stayner,....	Yorkshire	10 21	25 20	14 99

DAIRY PROFIT COMPETITION

Like the two previous competitions the Dairy Profit Competition suffered in the number taking part owing to the labor shortage. It is one of the most interesting contests particularly in the dairy sections of the Province. The regulations were given in the last report and need not now be restated.

Dairymen of the future.

The milk was valued on the following basis:

First three months, butter fat valued at 40c. per lb.
Second three months, butter fat valued at 43c. per lb.
Last month butter fat valued at 45c. per lb.

The skim milk was valued at 20c. per cwt. Accurate records were kept for a period of seven months of feed consumed and yield of milk. The feed was valued as follows:

Ground Oats	$38 00 per ton
Ground Barley	40 00 "
Bran	30 00 "
Shorts and Middlings	30 00 "
Gluten Feed	25 00 "
Oil Cake	50 00 "
Cottonseed Meal	33 00 "
Hay and Clover	12 00 "
Alfalfa	14 00 "
Timothy and Mixed Hay	10 00 "
Silage	3 00 "
Roots	3 00 "
Straw	6 00 "
Pasture	1 00 per month

There were only five contests conducted during the past season, the winners of which were sent to Guelph to take the two weeks' Short Course at the Agricultural College.

The following are the results in tabulated form:

DAIRY PROFIT COMPETITION, 1917

County and Winner	Value of Feed	Milk lbs.	Fat %	Fat lbs.	Value	Skim milk lbs.	Value	Net Profit
Dundas—	$ c.				$ c.		$ c.	$ c.
Dalton Timmins, Inkerman (Grade Holstein)	15 80	5,775	4.1	226.10	95 08	5,633.88	11 07	90 35
Lennox and Addington—								
P. R. Reid, Odessa (Grade Holstein)	11 49½	4,741½	3.9	181 12	75 30	4,560	9 12	72 92
Brant—								
Leslie Dyment, R.R. No. 4, Brantford (Ayrshire)	36 20	6,290	3.2	202 49	85 49	6,087.87	12 13	61 47
Grenville—								
Harold E. Wilson, Merrickville (Grade Holstein)	17 26	5,467	3.8	291.2	64 13	5,266.3	10 53	57 40
Hastings—								
M. R. Moore, Latta (Holstein Grade)	13 71	4,369	3.5	145.93	45 84	4,221	8 43	40 56

BABY BEEF COMPETITION

There were only five Baby Beef Competitions finishing during the past season. The steer calves were selected during the summer of 1916 and judged during November, 1917, the winners having the privilege of exhibiting at the Winter Fair at Guelph. Competitions were completed in the following counties: Lennox and Addington, Middlesex, Waterloo, Renfrew and Brant.

INTER-COUNTY LIVE STOCK JUDGING COMPETITION

There is no contest that creates as much rivalry and as keen an interest as the Inter-County Live Stock Judging Competition where teams of three boys under

twenty-five years of age and who have taken the Special Course in Agriculture conducted by the District Representative meet at the Winter Fairs to battle for the Duff and White trophies presented to the Guelph and Ottawa Winter Fairs, respectively.

The teams had to judge two classes of each of the following classes of live stock: Dairy cattle, beef cattle, heavy horses, sheep and swine. Twenty-five minutes were allowed for each class and the judges allowed 50 per cent. for correct placing and 50 per cent. for good reasons.

There were nineteen teams competing at Guelph, York County carrying off the honors for the second time in succession. The results of the contest are as follows:

County	Horses	Dairy	Beef	Sheep	Swine	Total
1 York	432	484	529	418	461	2,324
2 Oxford	537	410	454	409	393	2,203
3 Victoria	489	358	437	376	483	2,143
4 Middlesex	382	416	402	419	508	2,127
5 Essex	434	371	455	414	405	2,079
6 Waterloo	388	445	438	357	434	2,062
7 Durham	443	376	440	372	424	2,055
8 Haldimand	535	326	421	361	379	2,021
9 Brant	446	265	434	402	458	2,005
10 Wentworth	468	283	457	360	422	1,990
11 Simcoe	372	360	443	374	412	1,961
12 Grey	446	322	380	354	434	1,936
13 Bruce	448	242	426	383	408	1,907
14 Ontario	396	256	447	413	352	1,864
15 Peel	397	324	406	416	316	1,859
16 Halton	446	221	438	365	388	1,858
17 Norfolk	408	232	380	365	376	1,761
18 Welland	274	285	356	368	429	1,712
19 Lambton	330	310	359	314	389	1,702

Owing to the Ottawa Winter Fair being cancelled the Inter-County Live Stock Judging Competition for the eastern counties was held during Farmers' Week at Kemptville. The following is the tabulated score, Glengarry County winning the Peter White trophy:

County	Dairy Cattle	Beef Cattle	Horses	Sheep	Swine	Total
1 Glengarry	478	386	447	434	432	2,177
2 Dundas	420	388	439	388	381	2,016
3 Lanark	440	350	481	310	313	1,894
4 Peterborough	415	397	427	370	319	1,828
5 Grenville	286	396	424	299	421	1,826
6 Frontenac	499	263	401	334	251	1,748
7 Carleton	449	320	368	233	339	1,709

The Union Stock Yards and the Toronto packers have donated a magnificent trophy for the Grand Championship in the Judging Competition between the winners at Guelph and Kemptville. This contest was held in Ontario County on

February 14th where the York and Glengarry teams judged stock at the following places:

Dairy Cattle.....Dr. A. A. Farewell, Oshawa.
Heavy Horses.....Smith and Richardson, Columbus.
Sheep.....W. D. Dyer Brooklin.
Beef Cattle.....W. A. Dryden, Brooklin.

Swine were judged at the stock yards on February 15th. At the close of the contest the young men were taken through the stock yards and abattoirs where they were shown every courtesy. The travelling expenses of the two teams were borne by the Union Stock Yards Co. The contest was very keen, the trophy being won by York County.

The following is the score:

——	Dairy Cattle	Beef Cattle	Horses	Sheep	Swine	Total
York.....	392	505	465	389	360	2,111
Glengarry.....	471	406	311	394	340	1,922

FEED AND SEED GRAIN CAMPAIGN

In view of the conditions which prevailed last spring and the difficulty some farmers had of obtaining a supply of good seed due to the unfavorable season of 1916, a special campaign was conducted to arrange for an equitable distribution of seed. Evidently some farmers had a supply of good seed for sale, but the difficulty seemed to be in getting this to farmers who required to purchase for spring seeding.

Through a special advertising campaign farmers who had seed grain for sale were asked to send samples to the District Representative's office, together with a statement of varieties, prices asked and quantity for sale. Farmers requiring seed grain were asked to correspond with the office. A list of parties having seed for sale together with prices asked was sent to each enquirer. Farmers visiting the office examined the samples displayed and arranged their purchases direct. The District Representative's office was simply a clearing house for good seed. Buyers and sellers were put in touch with each other.

The following few examples give some idea of what was accomplished:

Glengarry.—2,000 bushels seed distributed among farmers who were unable to save any seed from their 1916 crop.

Lambton.—103 enquiries for seed grain either by letter or by telephone.

Peel.—The scheme helped dozens of farmers with their buying and selling.

York.—150 applications.

Besides seed grain some forty odd car loads of seed potatoes were distributed to farmers through the medium of the District Representatives. These potatoes were mostly from New Brunswick but a number came from the Western Provinces. Farmers' Clubs in many instances financed the transaction.

In addition to seed grain and potatoes the District Representatives are called upon to examine samples of red clover, alsike, alfalfa and timothy. Oxford County tested 50 samples last spring and Bruce County tested 75, some of which would grade, but some had to be recleaned. The latter county made germination tests representing in all 100 bushels of seed. This is a part from the samples which were sent direct to the Dominion Seed Laboratory at Ottawa.

LABOUR BUREAUX—FARM HELP

To assist in the distribution of available labor, the local Departments of Agriculture were made branch offices of the Provincial Labor Bureau with the District Representative in charge. The Farm Labor Bureaux worked in co-operation with the Resources Committee, with boards of trade, manufacturers' associations, Immigration Department and with any other association which could supply labor of any description. The demand for experienced labor and for boys was so great that the Representatives were swamped with applications.

A special effort was made in the "Harvest Help Campaign" to enlist the co-operation of business men and manufacturing concerns to close down their plants in order to help garner in the crops. In certain towns this was very effective in relieving the situation. In Frontenac County the District Representative organized a special "Saturday Help Campaign" with a view of getting High School boys to assist the farmers in harvesting their potato and root crops. Some fifty boys volunteered their services and arrangements were made with motor owners to see that they got out to the farms.

In Carleton County, a "Fork for Freedom" campaign was launched in Carp village, where some of the business men in the town volunteered to canvas the village and ascertain the number of men and boys available for work. The response was spontaneous, and the stores were closed for a couple of days. Carp was a deserted village and virtually every one went out to the harvest fields in motors to aid the farmers in saving food.

VEGETABLE CAMPAIGN, PRODUCTION CLUBS, BACK YARD GARDENING

A special effort was made to induce townspeople to cultivate vacant lots with the idea of increased food supplies and reducing the cost of living. Production clubs were organized, thrift campaigns were launched, backyard gardening received an impetus, community gardens were planned and vacant lots were secured, ploughed and rented to applicants at cost. In many instances factory owners rented land for home gardening and assisted their employees in cultivating their gardens.

In the Town of Galt over 200 vacant lots, averaging ⅕ of an acre each, were cultivated. In Brampton the school children were encouraged to grow vegetables. Prizes were offered for the best backyard gardens.

Besides these individual gardens the total amount of material distributed to Bramptonites, through the medium of the District Representative, was as follows:

105	packages of seed for the 30 x 40 garden.
93	packages of seed for the 20 x 30 garden.
75	packages of onions.
165	8-lb. bags potatoes.
25	larger orders of 1 bus. or more of potatoes.
3	dozen packages of sweet corn.
188	boxes of tomatoes.
2,000	cabbage plants.
20	boxes cauliflower.

In the fall the District Representative, in co-operation with the Institutes Branch, arranged for Canning Demonstrations as a Food Saving Scheme and great quantities of vegetables were thus preserved. In the four days of the demonstration in Brampton over one thousand women attended the demonstrations.

In all these garden campaigns the District Representative was the moving spirit. His services were in demand to address meetings on the growing of vege-

tables. His office was visited quite frequently by townspeople in order to get information about vegetable growing. Generally speaking, much enthusiasm was manifested by the town dwellers with regard to this campaign.

EXPERIMENTS AND DEMONSTRATION WORK

Alfalfa. During the past few years field demonstrations were conducted in various counties to show the value of using a hardy strain of alfalfa seed. Unfortunately the great bulk of alfalfa seed sold through local seed merchants has not been of a sufficiently hardy strain to withstand our rigorous winters. A good catch is almost invariably obtained but the plants are usually winter killed either the first or second season. The varieties used in these demonstrations are Grimm and Ontario Variegated. Sufficient seed was supplied to sow one acre and the test

Girls' driving contest at school fair.

was made both for seed and fodder production. The District Representative for Grey County reports that the home grown seed was superior to the southern or imported seed by ¾ ton per acre the first cutting. In Dundas County where the test was made with Grimm alfalfa, the plants came through the winter in excellent condition. In June it was impossible to tell the plot seeded in the drill and it cut three tons of hay per acre. The District Representative reports "experience teaches us that the first crop should be saved for seed; as high as $40.00 worth was obtained from one acre."

Spraying—Bordeaux for Blight. Demonstrations in spraying to control late blight of potatoes have been conducted for a number of years in various counties. Grenville County reports as follows: "A specially selected lot of seed potatoes of the Green Mountain variety was purchased and 15 bushels planted on an acre in drills 36 inches apart and sets 15 inches apart in the row. The potatoes were sprayed six times for bugs and blight with arsenate of lead and Bordeaux mixture. An inspector from the Dominion Laboratory of Plant Pathology at Ottawa rogued the plot in August and staked about two hundred of the most vigorous plants. The plot was pronounced one of the finest inspected. These

staked hills were carefully dug and kept separate and produced a remarkable uniform lot of potatoes. The plot yielded at the rate of two hundred and twenty-five bushels per acre. Spraying kept the foliage green and healthy and almost entirely free from disease, which proved an excellent demonstration as late blight did a lot of damage in our locality."

Drainage Demonstration Plots. Convincing evidence as to the value of underdrainage is given in the following extract taken from the report submitted by the District Representative for Frontenac County:

"The results from the drainage plot on the farm of Thos. A. Kerr, Harrowsmith, were very gratifying indeed, as were also those on the farm of Wm. Moreland, Sunbury. The crop grown this year was clover hay in both cases. On Mr. Kerr's plots, the drained plot of 9 acres produced 24 loads of clover hay, while the undrained check plot of 6½ acres only produced 8 loads of clover hay. It may be said that about one acre of the undrained portion was so badly watersoaked in 1916 when seeded down that it had to be ploughed up for grain. This would leave 5½ acres of undrained land against 9 acres of drained for comparison in production of clover. To bring the comparison down to common terms one may say that one acre of drained produced 2.44 loads, while one acre of undrained produced 1.45 loads, or practically 100 per cent. increase for drained land. On Wm. Moreland's plots, the drained land of 6 acres produced 20 loads of clover hay and the corresponding 6 acres of undrained produced 18 loads, or in other words a drained acre produced 5 loads while an undrained acre produced 3 loads of clover hay, or an increase of 66 per cent. in favor of drained land. These farmers had no means of weighing crops as they came from the field, but as the loads were about even in size the comparison was true enough for all practical purposes."

Tankage Experiment. Demonstrations in the feeding of live stock have been pretty much left to the agricultural colleges and experiment stations to work out. During the past season the District Representative for Peel County carried on an experiment in hog feeding, the object of which was to find out just what it cost to feed hogs at the high price of meals of all kinds and to compare three different rations for young pigs. I quote from his report as follows:

A litter of nine pigs was used and was divided into three pens, making the lots as uniform as possible. One lot was fed meal and Digester Tankage (the latter making up 10 per cent. of the ration), one lot was fed meal and sweet skim milk, and one lot meal only. The same kind of meal was used in each case and for the tankage lot and the meal only lot, was mixed with warm water. They were all housed in the same way, and were fed twice a day. The pigs were eight weeks' old at the beginning of the experiment which lasted ten weeks, and they were weighed every two weeks. For the first two weeks the meal consisted of one part wheat and barley mixed to two parts oats; from the seventh to the tenth, the meal was one part peas and two parts oats.

In each case the grain was chopped and no house slop was fed. Following is a table showing weights, gains and feed consumed by two-week periods:

—	Lot I—Meal and Tankage.				Lot II—Meal and Skim Milk.				Lot III—Meal and Water.		
	Wt.	Gain	Meal	Tankage	Wt.	Gain	Meal	Milk	Wt.	Gain	Meal
Weight of pigs on Dec. 20	110⅓	.....	.....	.....	107½	.....	.....	.....	111	.....	.....
Weight of pigs on Dec. 30	118	7⅔	.....	.....	119⅔	12	.....	.....	128	17	.....
2 weeks later	152	34	97⅓	11	179	59⅓	110	310	159½	31½	103½
4 " "	196½	44½	123	14	229	50	90	420	178	18½	123¾
6 " "	218	21½	119½	13	289	60	118½	560	212	34	120
8 " "	253	35	131½	16	329	40	100	560	233	21	114
10 " "	289	36	131½	15	374	35	144	560	249	16	116½
	.....	171	603	69	.....	254½	562½	2,420	.....	121	577½
Wt. of pigs on 12th week	341	52	185	20	440	66	174	560	307	56	126 meal 14 tank 560 milk

It will be noted that the pigs were first separated and weighed on December 20th, although the test did not begin until ten days later. This gave an opportunity to compare the gains of the three lots on the same feed which consisted of meal and skim milk before the separate feeding commenced. Although the lots were grouped at the first to make them as uniform as possible, Lot III appeared to be a little the smoothest and they were selected for the meal and water ration to give that feed the benefit of the doubt. The ten-day check (see table) shows that this lot did make the best gains at the start and that the tankage lot was poorest.

The results of the experiment are summarized in the table given below:

—	Average daily gain	Total gain	Total feed Meal	T. or M.	Total cost of feed	Cost of 100 lbs. gain
Lot 1—Meal and 10% tankage with warm water	.81	171	603	69	14–13	8.26
Lot 2—Meal and skim milk	1.21	253	563	2,420	20–00	8.21
Lot 3—Meal and warm water.	.58	121	577		11–54	9.54

In calculating the cost of gains, all the meal was valued at two cents per pound, the tankage, $60.00 per ton, and the skim milk at 40c. per cwt. The value of milk was based on the assumption that when meal is worth $20.00 per ton that skim milk has a feeding value of at least 20 cents per cwt. The figures show that the skim milk lot received about four pounds of milk to each pound of meal, which is rather a large amount of milk, and they consequently ate less meal than the other lots.

There were a few things of interest that we observed in connection with this test that are not shown by the tables. One of the pigs in lot III, crippled badly and was scarcely able to get up and went off its feed nearly altogether in the eighth week. This was no doubt due to the fact that their ration of meal and water did not supply sufficient bone forming material. However, they were given some charcoal and ashes and this seemed to help quite a little. None of the pigs in the other lots showed any signs of crippling, probably because the tankage contained six per cent. of phosphates and the skim milk also supplied a certain amount of ash. The test was to have lasted only ten weeks but the weights of all the lots were taken again at the end of the twelfth week with all the rations the same as before except that lot number III received ten per cent. of tankage with the meal and 560 pounds of milk in the last two weeks. We see by the gain column for lot III, that they put on four times as much gain after being fed the tankage and milk than they did in the two weeks previous on meal alone.

In conclusion, this test shows that there was little profit in feeding the pigs on meal and water alone. It shows that this farmer could well afford to pay $60.00 per

ton for high-grade tankage when meal is at the present price and that by so doing he was able to produce pork at $1.28 less per cwt. The lot fed milk even in such large quantity and valued at 40c. per cwt. made slightly more economical gains. We thought the tankage lot would have made a better showing if it had not been for the fact that one of the pigs was larger than the other two and bossed them at feeding time. Then one of that pen seemed to be a born runt and was the poorest one in the litter from the start. Although only one proportion of tankage to meal (namely, ten per cent.) was fed, I am of the opinion that about eight per cent. would have been better.

Testing Varieties of Corn for Silage. For the past three years District Representatives have been conducting a variety test with ensilage corn to determine if possible the varieties best adapted to local conditions. From four to six farmers in each county co-operated in conducting this test. First class seed corn was procured in the corn belt of Ontario and the following seven standard varieties constituted the experiment:

Dent:
Wisconsin No. 7.
Golden Glow.
Bailey.
White Cap Yellow Dent.

Flint:
Compton's Early.
North Dakota.
Longfellow.

The details as to the method of carrying out these tests were given in previous reports. During the summer months the plots were inspected and scored as to stand, uniformity, type and vigor, freedom from smut and insects, quality and maturity. When harvested the yield of green corn per acre was obtained. Unfortunately weather and labor conditions have been somewhat unfavorable and abnormal during the last couple of years and as a result the experiment could not be counted as a success. From the reports received no one variety can be recommended for all sections of the Province.

The following tabulated statement gives the results of this experiment conducted by the District Representative for Durham County:

——	1915	1916	1917	Average tons per acre
Wisconsin No. 7	15.38	9.5	8.80	11.22
Bailey	14.11	8.8	8.44	10.45
Golden Glow	13.6	9.2	8.42	10.40
Compton's Early	12.8	9.5	7.98	10.09
Salzer's N. Dakota	12.41	8.5	6.52	9.14
White Cap Yellow Dent	12.43	8.2	9.05	9.89
Longfellow	10.46	9.1	6.78	8.78

Very little difference is noted in the Dent varieties of Wisconsin No. 7, Bailey, and Golden Glow. During the past season reports would indicate that Golden Glow was the favorite, having the ears more matured and equally as great as to yield.

Smut Campaign. Through the special campaign conducted during the past two years in regard to the use of formalin to control smut it has been found that the practice has become much more general. Druggists report an increased demand for formalin, in fact in one or two counties it is estimated that their sales of this liquid have increased from 50 to 75 per cent. during the past year. Besides advertising through the press and by letter District Representatives have conducted a number of demonstrations on farms to show the proper method of treating the seed grain in order to control smut. These demonstrations have proved to be very interesting and instructive. An interesting observation was made in Dundas County at harvest time and pointed out to a number of farmers present.

"One farmer treated his seed grain for smut for three years in succession.

Right over the fence was a good looking field of oats that had not been treated. In the field, the seed of which was treated, it was impossible to find a single smutted head although two or three were looking for it. In the other field, by actual count on a drill 3 feet long, we found 32 per cent. to be destroyed by smut. This was a convincing argument to the men present that it paid to treat for this fungus disease."

Besides the demonstrations above mentioned the District Representatives have conducted mustard spraying demonstrations to show by using iron sulphate that the young mustard plants can be kept in check; apiary demonstrations have been held to give those interested in beekeeping some idea of the proper methods of handling bees, how to detect and get rid of foul brood, swarm control and other problems of the beekeeper; pruning and spraying demonstrations in orchards; poultry killing and plucking and crate fattening. Demonstrations were carried on in a number of counties all of which were not only interesting but very instructive.

DRAINAGE SURVEYS

All District Representatives' offices are equipped with surveying instruments and during the past few years they have been called upon to make drainage surveys for farmers, prepare maps and profiles of drains and to assist farmers in putting in tile drains. Owing to the scarcity of help District Representatives have in several cases assisted the farmers in organizing a co-operative association to purchase a ditching machine in order that the work of putting in drains might go along unhampered. A great deal of the applications for assistance in drainage work have been transferred to the Physics Department of the Ontario Agricultural College, Guelph, where a permanent staff is at the service of farmers.

While it is difficult to give any accurate data as to the number of tile drains laid each year the following cases might be cited which give some idea of the interest in this work.

Bruce County reports 23 surveys were made during the past season, plans and profiles were prepared and the majority had their systems installed.

Dufferin County reports as follows: "During the year the following drainage work has been done under supervision of this office:—

No. 1— 20 acres outlet	.....	1,300	feet tile
" 2—100 "	.....	65,000	"
" 3— 30 "	.....	6,000	"
" 4—100 "	.....	20,000	"
" 5— 15 "	.....	1,160	"
" 6— 25 "	.....	5,000	" *

*This was laid out but drains not put in.

Elgin County reports 6,478 rods or 21 miles were profiled, these drains being on 50 different farms.

Essex County surveyed 1,430 acres on 23 farms and made 12 smaller surveys giving fall or locating an outlet.

Lambton County had 1,300 acres of drainage maps completed and given to farmers. There are 30 ditching machines operating in the county. Records in the office show 368 farmers actually put in tile and the number of acres drained totals 6,268.

Oxford County reports that 42 farmers made special requests for assistance. One hundred and fifteen acres were surveyed and plans prepared and 8 miles of profiles were charted. Fifty per cent. of the drainage applications included awards.

The season of 1917 saw more farmers prepared to put tile drains in their farms than any one season previous. Tile plants, both cement and clay, throughout the Province have been working at full capacity all summer to meet the demand for tile.

BREEDERS' CLUBS

During the past year the District Representatives were instrumental in organizing a number of Horse Breeders' Clubs with the object of taking advantage of the Federal Assistance to Horse Breeders whereby a special premium is placed on stallions of recognized breeding and conformation and thereby improve the class of horses in the Province. The following clubs were organized during the past year:—

Brant County—Onondaga Horse Breeders' Club.
Durham County—Clarke Horse Breeders' Club.
Glengarry County—Bainsville Horse Breeders' Club.
Haldimand County—Hagersville Horse Breeders' Club.
Ontario County—Zephyr Horse Breeders' Club.
Simcoe County—Allenwood Horse Breeders' Club.
Wentworth County—South Wentworth Horse Breeders' Club.

A number of Holstein and Ayrshire Breeders' Clubs were organized with the object of encouraging community breeding. The following came into being:—

Grenville County—Grenville County Holstein Breeders' Club.
Dundas County—Dundas District Ayrshire Breeders' Club.
Durham County—Durham County Holstein Breeders' Club.
Middlesex County—Middlesex Holstein Breeders' Club.

The following is the constitution which has been adopted by one of the Breeders' Clubs and is similar to others:—

CONSTITUTION AND BY-LAWS

1. This organization shall be known as the ..... District Holstein Freisian Breeders' Club.

2. The objects of the Club are the promotion of good fellowship amongst its members, and the advancement of the general interests of the Holstein Freisian breed of cattle, by the holding of sales at auction, by encouraging the entry of cows and heifers in the advanced registry, discussion of the best methods of breeding, rearing and exhibiting, and raising the standard of excellence of the breed; by bringing before the public the good qualities and exceptional merits of the breed, and in other ways to generally widen and extend the interest of this breed of cattle; by acting in unison upon all occasions which demand it and by establishing a reputation for ..... County as a centre for high-class Holstein Freisian Cattle.

3. The membership shall consist of persons who own at least one pure-bred animal and who shall pay the required annual fee.

4. Every application for membership shall be passed upon by the Board of Directors.

5. The officers shall be: Honorary President, President, 1st and 2nd Vice-Presidents, Secretary-Treasurer. There shall also be not more than nine Directors and one Honorary Director.

6. The District Representative of the Department of Agriculture shall be, ex-officio, the Honorary Director.

7. The officers and directors shall constitute a Board who shall have entire control and management of the affairs and business of the Club, with full power to do what they deem right and proper for the best interests of the Club.

8. In the event of any office becoming vacant from any cause, the vacancy shall be filled by the Board of Directors for the unexpired term of that office.

9. At any meeting of the Board of Directors duly called a majority of its members shall constitute a quorum.

10. At any meeting of the Club duly called fifteen per cent. of the membership shall constitute a quorum.

11. Notice of any proposed amendments to the By-laws shall be handed to the Sec-

retary at least 30 days previous to the meeting at which such amendment is to be acted upon, and notice of such proposed amendment shall be sent by the Secretary to each member of the Club at least one week previous to such meeting.

12. The duties of the officers shall be those customary to such positions in similar organizations.

13. The regular annual meeting of the Club shall be held at .....the third Wednesday in December.

14. Voting for Officers and Directors shall be done by ballot.

15. Special meetings may be held from time to time as the Board of Directors deem advisable.

16. Notices of regular and special meetings shall be mailed by the Secretary-Treasurer to the last known address of each member.

17. The annual membership fee shall be $2.00 payable on or before January 1st in each year for the ensuing year.

REFORESTRATION

In many counties of the Provinces there are blow sand areas which are non-productive and which could be profitably devoted to forestry. Demonstrations of forest plantations have been established in order to show the possibility of reforesting these non-agricultural tracts of land. District Representatives have been giving considerable attention to this question and assist farmers in getting started with their plantations, material for which is supplied free by the Government.

The following extract taken from one of the reports submitted by a District Representative is worthy of interest:—

> The plot which was reforested a few years ago has made remarkable growth, the trees now averaging from seven to eight feet in height. A few years ago this plot was nothing but blow sand. It is right beside a main road and it was very difficult to keep the highway from filling up with sand. Today the area is entirely sodded over, and one would never suspect that it once contained blow sand which was a menace to the travelling public. When these trees were first planted everyone was sceptical as to the outcome. It was firmly believed by all that the trees could not survive. The appearance of the plot today has changed all this with the result that we have one or two opportunities for making similar plantings in the near future.

CO-OPERATION

The District Representatives have many requests to assist the farmers to form some organization for their mutual benefit, whether it be a Farmers' Club, Live Stock Shippers' Association, Co-operative Fruit or Vegetable Growers' Association, Seed Growers' Association, Milk and Cream Producers' Association or an Egg Circle, etc. Wherever a new organization comes into being, it shows the trend of thought in the community. These organizations do not confine their efforts simply to the purchase of staple commodities such as sugar, coal, flour, feed, salt, fencing material, seed corn, clover seed, etc., but they sell their produce co-operatively and thereby are able to reap greater profits from their business. Strict co-operation is practiced for the betterment of the community. To give some idea of the extent of the work being done in this manner, some concrete examples might be recorded. Six farmers' clubs in Halton County during the past year purchased some $37,933.00 worth of goods. In Lambton County, 33 of the 48 farmers' clubs are organized in the Lambton County Co-operative Association which is incorporated with a Provincial charter. The first annual statement covering a period of 8½ months shows a business turnover of $75,000.00. In Leeds County a co-operative association chartered under *The Ontario Companies Act* and capitalized at $10,000.00 commenced business on June 13, 1917. Stock

was sold to five local Poultry and Egg Marketing Associations in the County. The total gross business handled during the year was as follows:—

In eggs to the value of	$48,440 31
In poultry to the value of	11,170 83
In hogs to the value of	16,796 08
In feed to the value of	51,497 86
In seed to the value of	1,200 00
In cheese to the value of	600 00
Total	$129,595 08

In eggs the members made a net gain of from 1¾ cents per dozen on 129,635 dozen during the year; poultry was marketed from ⅔ cents per pound advance; hog prices were increased as a direct result of the association marketing hogs by from ½ to 1¼ cents per pound on all hogs marketed in the district and the members got an additional increase of from ½ to ¾ cents per pound; while feed was purchased at a saving of from $1.00 to $4.00 per ton on all feed bought.

MARKETING HOGS CO-OPERATIVELY

As this subject is a live topic at this time it will be interesting to note how this matter is handled in Leeds County. The District Representative quotes as follows:—

"Up to October 20th we have marketed four carloads with excellent results. Our rules and regulations are very simple. They merely consist of regulations by means of which the hogs are to be sold on a graded basis. Hogs graded select, that is, of bacon type between the weight of 170 and 220 lbs., are paid for at the top price, while 50c. per 100 is taken off on hogs that are too light, the same cut being made on extremely fat hogs. Extra heavy hogs are sold according to market specifications for their respective classes. As a result of the organization we have been able to pay our members an advance over regular market prices at local points from 25c. per 100 lbs. to $1.20 per 100. We have also benefited non-members due to the fact that since our co-operative shipping has been inaugurated, local buyers are following the market considerably closer than had been previously the case. Non-members are receiving approximately 50c. to $1.00 per 100 more for their hogs from competitive buyers.

"We have had the experience of local buyers, endeavoring to break our association and this has been a good thing for non-members, and has in no way shaken the confidence of our members in the work of the association. We realize that our organization is not perfect, and we intend to improve our system as occasion demands.

"At the present time we are selling our hogs f.o.b. shipping point. There is an understanding between the packers and our Co-operative Association that the District Representative be responsible for the grading and the valuation of the hogs shipped. We have had no difficulty with any of our farmers finding fault with our grading, and consequent cuts, nor have we had any complaint from the packers in regard to the class of stuff shipped in their respective grades. As intimated in our constitution and a point that is always kept before the members, quality is our aim. Only by marketing a superior class of stuff do we hope to obtain advanced prices, and all our work is done with this end in view.

"Practically all the information in connection with loading the car, giving prices and sales, is done by our local manager over the telephone. The members keep our manager posted as to when their hogs will be fit to ship, and the members

are given an opportunity to ship in turn as the hogs are finished. To date we have had no difficulty in getting almost the exact number of hogs required for our car. The manager knows in advance just who is going to bring in hogs on the certain date consequently we have not had to overload our cars, nor to turn back any members who have brought in pigs.

"The hogs are all paid for when delivered. The local weigher does all the weighing. We believe it in the best interest of the Association to have the weighing done by an impartial man in no way connected with the association.

"We find it is not necessary to charge much commission in connection with the hog shipping propaganda, and if at the end of the year there is any surplus as a result of these commissions, it will be divided among the shippers in proportion to the value of hogs marketed. I might state that all hog quotations to members are net at the car."

WIDE SCOPE OF WORK

Besides the many special features of work enumerated it may be pointed out that the activities of these men embrace every field of agricultural endeavor. The District Representative assisted in getting the farmers to market wool co-operatively through which the farmers sold 300,000 lbs. of wool for an enhanced price. Pure Seed Centres are being organized from time to time, the object of which is to improve the quality of the seed produced in the district. Fruit Growers', Vegetable Growers', Beekeepers', and Cow Testing Associations, in fact, all organizations connected with the rural communities and which have for their object the betterment of agricultural conditions are being organized and encouraged through the District Representative Work.

Special meetings in connection with the Organization of Resources Committee have been held with the object of organizing for greater production; special exhibits of an agricultural and educational nature have been prepared and staged at the various fall fairs; Pure-bred Stock Associations have been formed with the object of having an annual sale to dispose of surplus high-class breeding animals; automobile tours or excursions have been arranged with the object of conducting the farmers to some particular county or counties where special lines of agriculture are carried on, where they may inspect good herds of breeding stock, inspect up-to-date farm buildings, hydro-electric equipment, water systems, and examine special crops growing in the district.

Many of the District Representatives are called upon to test samples of milk and cream, make germination tests of seed, examine clover and grass seed samples for impurities, and show farmers how to treat for Blackleg which has caused a number of young animals to die. Much time is spent in preparation of addresses, articles for the press, attending to correspondence, and keeping records and giving information to farmers and others who visit the office, answering telephone calls and attending the various committee meetings held in the office.

The office where bulletins and farm papers are on file is used as a board room for such meetings as the Agricultural Society, Horticultural Society, Vegetable Growers' Association, Poultry Association, Women's Institutes, Boards of Agriculture, Plowmen's Association, Fruit Growers' Association, Farmers' Clubs, Junior Farmers' Improvement Association, Breeders' Clubs, Egg Circles and other agricultural organizations.

The following summary of a few offices of the correspondence, telephone calls,

personal visits at the office, meetings held in District Representative's office and bulletins distributed will be of interest to show the extent of the office work:—

County	Letters received	Letters sent	Circulars	Telephone calls	Visitors	Meetings held in office	Bulletins
Brant	800	1,730	.....	574	636	.....	.....
Bruce	.....	.....	.....	.....	1,000	.....	.....
Dufferin	.....	.....	.....	.....	2,741	.....	.....
Dundas	1,450	1,500	6,888	.....	.....	.....	.....
Durham	1,440	3,312	.....	88	733	37	.....
Hastings	854	1,742	2,856	341	1,111	70	.....
Middlesex	.....	3,547	.....	.....	2,594	.....	1,345
Peterborough	945	960	5,000	551	325	.....	385
Prince Edward	1,297	1,177	3,402	.....	2,416	.....	.....
Waterloo	1,384	5,360	4,145	.....	1,498	.....	2,858
Wentworth	.....	1,589	.....	.....	3,567	.....	.....

To give one an idea of the Agricultural and Improvement Associations in the Province, the following list in Dundas and Lambton might be worthy of mention:—

In Dundas County.

Organization.	Membership.	Organization.	Membership.
Aultsville Farmers' Club	104	Mountain Agricultural Society	20
Dundas Cheese Makers' Assoc.	25	Morrisburg Farmers' Club	68
Dundas-Grenville Ayrshire Club	35	Matilda Farmers' Club	100
Dundas Agricultural Society	80	Newington Agricultural Society	76
Dundas Farmers' Institute	118	River Front Farmers' Club	95
Dundas Women's Institute	300	St. Lawrence Valley Fruit G. A.	25
Dundas Co-operative Association	50	Williamsburg Co-operative Assoc.	115
Dundas Farmers' Club	58	Winchester Horticultural Assoc.	75
Finch Co-operative Association	86	Winchester Agricultural Assoc.	103
Finch Agricultural Society	60	Wales Junior Farmers' I. A.	16
Finch Junior Farmers' I. A.	20	Melvin Farmers' Club	40
Mountain Junior Farmers' I. A.	25	Dundas District Holstein Breeders' Club	30
Mountain Farmers' Club	60		

Total number of associations, 25; total membership, 1,856.

In Lambton County.

Organization.	Approximate Membership.
1. County Board of Agriculture	90
2. Lambton Corn Growers' Association	350
3. Nine Individual Fruit Growers' Associations	300
4. Two Vegetable Growers' Associations	150
5. Lambton County Fruit and Vegetable Growers' Association	650
6. Forty-eight Farmers' Clubs	1,500
7. A Federation of Farmers' Clubs into the Lambton County Co-operative Association	37 clubs
8. Lambton County Pure-bred Live Stock Association	60
9. Lambton County Beekeepers' Association	100
10. Six Rural School Fair Associations, comprising	60 schools
11. Alvinston and Brooke Township Schools Exhibit, a combined exhibit of 22 schools at the Alvinston and Brooke Fall Fair	22 schools
12. Three Rural Schools Township Trustees' Association to promote School Fair Work	....
13. Four Local Sugar Beet Growers' Associations	100
14. Lambton County Publicity Association	....
15. Two Junior Farmers' Improvement Associations	45

A glance at the meetings addressed during the year in one county would seem to show the demands made upon the District Representative:—

Date	Place	Organization	Subject	Attendance
Nov. 28	Shanty Bay	Farmers' Club	Dairy Cattle	15
" 28	" "	" "	Co-operation	30
" 29	Crown Hill	" "	Short Course and J.F.work	18
" 30	Oro	" "	Beef Cattle	20
Dec. 11	Hawkestone	" "	Competitions	30
" 11	"	" "	Draft Horses	12
" 12	Mitchell's Square.	" "	Farmers' Clubs	18
" 12	" "	" "	Sheep	28
" 13	Rugby	" "	Effects of Bacteria	60
" 13	"	" "	Dairy Cattle	18
" 14	Jarratt's	" "	Swine	22
" 14	"	" "	Co-operation, Smuts	31
" 15	Price's Corners	" "	Dairy Cattle	19
" 15	" "	" "	Club Possibilities	32
" 18	Warminster	" "	Beef Cattle	19
" 18	"	" "	Smuts and Rust	25
" 19	Uhthoff	" "	Beef Cattle	8
" 19	"	" "	Education & Co-operation.	28
" 20	Ardtrea	" "	Ayrshire Cattle	16
" 20	"	" "	Fungus Diseases & Smut	22
Jan. 5	Alliston	Board of Agriculture	Drainage	11
" 6	New Lowell	" "	"	26
" 8	Stayner	" "	Co-operation and Short Courses	24
Feb. 14	Creemore	J.F.I.A.	Competitions	21
" 24	Beeton	Better Farming Special	Explanation of Slides	65
Mar. 15	Duntroon	Farmers' Club	Wool Grading and Horse Breeding	36
" 16	Dalston	Grange	Soil Fertility	41
" 17	Orillia	Board of Agriculture	Executive Meeting	.....
" 21	Jarratt's	Farmers' Club	Horse Breeders and Wool Grading	35
" 23	Allenwood	" "	Live Stock Demonstration	100
April 4	Alliston	Patriotic Club	Horse Breeding	60
" 4	"	.....	Gardening	300
" 14	Barrie	Executive County	Fair Prize List	8
June 2	Duntroon	Board of Agriculture	Annual Meeting	24
" 8	Orillia	" "	" "	61
" 14	Wasaga	" "	" "	300
July 9	Stroud	School Fair Directors	.....	11
" 9	Ivy	" "	.....	7
" 16	Minesing	" "	.....	9
" 16	Mitchell's Square	" "	.....	13
" 23	Moonstone	" "	.....	9
" 23	Uhthoff	" "	.....	12
Sept and Oct.	9 School Fairs	.....	.....	7,775

The number of farmers in touch with each office during the year might best be illustrated by giving figures from one of the reports submitted by the District Representative:—

Farmers' Meetings	600
Two-day Short Courses	700
Demonstrations	50
Month's Course	125
Drainage Surveys	50
Callers	1,000
School Fairs	8,200
Seed Exchange and Purchase	200
Wool Shipping	25
Breeders' Club	50
	11,000

Respectfully submitted,

W. H. HEARST.
Minister of Agriculture.

FORTY-THIRD ANNUAL REPORT

OF THE

Ontario Agricultural College

AND

Experimental Farm

1917

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE)

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

1918

Printed by
WILLIAM BRIGGS,
Corner Queen & John St.
Toronto.

To His Honour Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I have the honour to present the Forty-third Annual Report of the Ontario Agricultural College and Experimental Farm.

W. H. HEARST,

Minister of Agriculture.

Department of Agriculture,
Toronto, 1918.

THE ONTARIO AGRICULTURAL COLLEGE, GUELPH.

HON. SIR W. H. HEARST, *Minister of Agriculture, Toronto.*

FACULTY OF INSTRUCTION, 1917.

(All, except the President, arranged in order of Seniority.)

G. C. CREELMAN, B.S.A., LL.D. ..... President
H. H. DEAN, B.S.A. ..... Professor of Dairy Husbandry
C. A. ZAVITZ, B.S.A., D.S. ..... Professor of Field Husbandry
J. HUGO REED, V.S., ... Professor of Veterinary Science
G. E. DAY, B.S.A. ..... Professor of Animal Husbandry
R. HARCOURT, B.S.A. ..... Professor of Chemistry
MISS M. U. WATSON ..... Director of Home Economics
JOHN EVANS ..... Professor of Manual Training
C. J. S. BETHUNE, M.A., D.C.L. ..... Professor of Entomology and Zoology
W. R. GRAHAM, B.S.A. ..... Professor of Poultry Husbandry
W. H. DAY, B.A. ..... Professor of Physics
J. W. CROW, B.S.A. ..... Professor of Horticulture
J. E. HOWITT, M.S.A., ... Professor of Botany
D. H. JONES, B.S.A. ..... Professor of Bacteriology
O. J. STEVENSON, M.A., D.Paed. ..... Professor of English
L. CAESAR, B.A., B.S.A. ..... Associate Professor of Entomology
W. J. SQUIRRELL, B.S.A. ..... Associate Professor of Field Husbandry
MISS ANNIE ROSS, M.D. ..... Lecturer in Physiology, Home Nursing and Psychology
H. H. LEDREW, B.S.A. ..... Lecturer in Economics and English
WM. HUNT ..... Lecturer in Floriculture
MORLEY PETTIT ..... Lecturer in Apiculture
E. W. KENDALL, ... Lecturer in Manual Training
H. L. FULMER, B.S.A. ..... Lecturer in Chemistry
R. R. GRAHAM, B.A., B.S.A. ..... Lecturer in Physics
R. E. STONE, B.Sc., Ph.D. ..... Lecturer in Botany
A. W. BAKER, B.S.A. ..... Lecturer in Entomology
T. H. LUND, B.S.A. ..... Lecturer in Bacteriology
F. N. MARCELLUS, B.S.A. ..... Lecturer in Poultry
H. M. KING, B.S.A. ..... Lecturer in Animal Husbandry
A. LEITCH, B.S.A. ..... Lecturer in Farm Management
G. H. UNWIN, B.S.A. ..... Lecturer in English and French
A. L. GIBSON, B.S.A. ..... Lecturer in Chemistry
A. MACLAREN, B.S.A. ..... Lecturer in Rural Sociology
A. H. TOMLINSON ..... Lecturer in Forestry and Landscape Gardening
A. H. MACLENNAN, B.S.A. ..... Lecturer in Horticulture
R. C. MOFFATT, M.A. ..... Lecturer in Physics
MISS M. A. PURDY ..... Demonstrator in Chemistry
MISS JEAN RODDICK ..... Instructor in Domestic Science
MRS. F. DOUGHTY ..... Demonstrator in Domestic Art
MISS ALTA V. DICKEY ..... Instructor in Domestic Art
W. H. WRIGHT, B.S.A. ..... Demonstrator in Botany
MISS BELLE MILLAR ..... Demonstrator in Dairying
MISS NETTA M. NIXON ..... Demonstrator in Domestic Science
G. J. SPENCER, B.S.A. (Enlisted) ..... Demonstrator in Entomology
W. L. IVESON, M.A. ..... Demonstrator in Chemistry
J. P. SACKVILLE, B.S.A. ..... Demonstrator in Animal Husbandry
R. J. SKELTON, B.S.A. (Enlisted) ..... Demonstrator in Dairying
R. FINKLESTEIN, B.S. in Agr. ..... Demonstrator in Bacteriology
W. H. SCOTT, B.S.A. ..... Demonstrator in Physics
MISS H. THEODORA JOB ..... Instructor in Normal Methods
MISS E. JENNIE ROGERS ..... Demonstrator in Laundry and Household Administration
MISS RONA FRASER ..... Supervisor of House Practice
W. H. SPROULE ..... Demonstrator in Dairying
E. HEARLE, B.S.A. ..... Resident Master and Instructor in English
A. H. MUSGRAVE ..... Instructor in Athletics

COLLEGE OFFICERS.

G. C. CREELMAN, B.S.A., LL.D. ..... President
S. SPRINGER ..... Bursar
S. H. GANDIER, B.S.A. ..... Secretary
E. HEARLE, B.S.A. ..... Resident Master
MISS J. GARDINER ..... Librarian
MISS A. O. HALLETT ..... Assistant Librarian
W. O. STEWART, M.D. ..... Physician
MRS. M. CUNNINGHAM ..... Matron
MISS M. MONTGOMERY ..... Dietitian

ONTARIO AGRICULTURAL COLLEGE

AND EXPERIMENTAL FARM

1917

To the Honourable the Minister of Agriculture:

SIR,—I have the honour to submit herewith the Forty-third Annual Report of the Ontario Agricultural College and Experimental Farm, including the work of Macdonald Institute, for the year 1917:

THE YEAR.

A quiet and uneventful year has just drawn to a close; everything about the College is quiet; the students are all keen on their work, for those who are still at College are unfit for war, or under age.

Over 500 of our men are now in uniform, while 64 have already been killed, and more than 100 wounded. Not a man about the Institution but feels that the war must be prosecuted until democracy triumphs, until the seas are free, and small countries are allowed to live and work out their own destinies.

All through the year students dropped out as they became old enough to be drafted into the army. Some members of the staff went with them.

The Officers' Training Corps was well attended, and large donations were given from time to time by the staff and students for Red Cross, Field Comforts, and Patriotic Fund.

Wounded soldiers are constantly returning both to the student body and the staff, only it takes them all some time to settle down, for in this war it would seem the shock of the heavy artillery alone is sufficient to wreck the nerves for months or even years afterwards.

We have been able, also, to entertain and instruct the convalescent soldiers at the new Military Hospital, located on the site of the Provincial Prison Farm.

THE PROVINCE.

Nineteen hundred and seventeen proved to be a better growing season than the previous one for the Province of Ontario.

Dairying received a great impetus because of the frequent showers and consequent excellent pasture. The different campaigns for greater production had also their reward. Never were so many vegetables raised in Ontario before, and thousands of people will have garden produce of their own raising in their cellars

until next spring. This has been good for the people, and for their families. It has given townspeople an idea of the amount of work required to raise a crop; the amount of patience needed; the dependence upon Providence for sunshine and rain; the difficulty of keeping plants growing in dry, hard ground; the necessity for fertilization and constant cultivation, and the amount of labor required in preparation of land, planting, cultivating, and harvesting the crop—this should all tend to make a better understanding between the town and country people.

On the other hand, the farmer appreciates the spirit of the townspeople in wanting to help on the farms, and thousands of boys and men from the cities have gone out this season to help in a larger production in country places. During the summer, hired help was very scarce. Many of our farmers' sons have gone to the war and the itinerant help that might be expected to take their places was not forthcoming. Wages are so high in the towns and cities that farmers cannot enter in the keen competition. Our farmers, therefore, have had to work harder themselves than they ever did before, but by planning their work carefully, by the use of improved machinery and more horses, by the introduction of the tractor ploughs and other labor-saving devices, have been able to produce a large crop at this time of need.

A Commissioner of Agriculture.

At the beginning of the year the Premier of the Province decided to assume the duties of Minister of Agriculture, and at the same time decided to appoint a Commissioner who would have general oversight of the work of the Department. The President of the College was selected for this post, and has spent three days each week in Toronto during the year.

College Work and Progress.

The attendance at short courses in 1917 was as follows:—

Dairy Courses	76
Stock and Seed Judging	189
Poultry Raising	25
Fruit Growing	16
Apiculture	50
Rural Leadership	24
Drainage	18
Total	398

Stock Judging.

From our Senior Class is selected a team of five men each year to compete in stock judging at the International Live Stock Exposition held in Chicago in December. We do not select our team until just before the show, so that the entire class of senior students who are taking the agricultural option are given thorough instruction, and each man a chance to compete for a place on the team until the last moment. This year the following men composed the team:—

Ferguson, F. L., Parkhill, Ont.
Graham, H. W., Britannia Bay, Ont.
Munro, D. A., North Lancaster, Ont.
O'Neill, L. E., Bradford, Ont.
Wilson, G. R., Merrickville, Ont.

RESULT OF STUDENTS JUDGING COMPETITION, PROVINCIAL WINTER FAIR, 1917.

Horses.

Harry Earle	176
W. R. Gunn	173
D. J. Matheson	164
C. Lamont	163
G. Patchett	161
G. DeLong	160

Sheep.

R. Newton	176
A. H. Musgrave	173
G. H. Scott	171
E. J. Quail	158
H. R. Sweeney	157
T. Cooper	155

Swine.

G. W. Michael	187
C. B. Boynton	184
A. P. Clark	182
R. R. Secord	181
W. Hawley	180
S. King	179

Dairy Cattle.

T. R. Maxwell	178
W. A. Hume	175
E. C. Stillwell	169
H. L. Davis	147
G. DeLong	144
C. F. McKenzie	137

Beef Cattle.

D. Leitch	179
B. W. Maxwell	175
W. E. Snowden	174
C. Jamieson	173
W. D. Tolton	172
F. W. Foran	167

Poultry.

First Year	925
Third Year	1,036
Fourth Year	1,030

Year Standing.

Fourth Year	4,839
Third Year	4,629
First Year	3,645
Second Year	3,495

We find that the war is affecting the attendance at the Agricultural College in about the same proportion as at other educational institutions. In our regular courses of two and four years the numbers are greatly reduced. The attendance at the summer courses for teachers and the short winter courses for farmers has been very good under the circumstances, figures for summer school being almost double those for the year 1916.

(Figures for general course include students of winter term and new students who entered the fall term.)

General Course	287	
Specialists in General Course Work	4	
Manual Training (One Year Normal Course)	10	
Dairy Courses	76	
Stock and Seed Judging	189	
Poultry Raising	25	
Fruit Growing	16	
Apiculture	50	
Drainage	18	
		675
Domestic Science (at Macdonald Institute)		360
Summer Courses—High School—First year, 10; second year, 15	25	
Public School teachers, first year	153	
Public School teachers, second year	89	
School for Rural Leadership	120	
Farm Mechanics	11	
		398
Total		1,433

Analysis of College Roll (General Course), 1917.

From Ontario.

Brant	4	Huron	1	Perth	6
Bruce	2	Kent	2	Prescott	2
Carleton	23	Lambton	9	Prince Edward	3
Dufferin	1	Lanark	4	Rainy River	1
Dundas	4	Leeds	5	Renfrew	3
Durham	5	Lennox & Addington.	2	Russell	4
Elgin	5	Lincoln	4	Simcoe	4
Essex	7	Middlesex	18	Stormont	1
Frontenac	5	Muskoka	3	Thunder Bay	2
Glengarry	5	Nipissing	1	Victoria	1
Grenville	4	Norfolk	3	Waterloo	8
Grey	3	Northumberland	1	Welland	4
Haldimand	4	Ontario	6	Wellington	17
Halton	1	Oxford	10	Wentworth	9
Hastings	5	Parry Sound	1	York	29
Leeds	5	Peel	3		

Total from Ontario. 245

From Other Provinces of the Dominion.

Alberta	2	New Brunswick	2	Prince Edward Island	4
British Columbia	9	Nova Scotia	4	Saskatchewan	1

Total from other Provinces 22

From Other Countries.

Argentine Rep.	1	England	3	U. S. A.	12
B. W. I.	1	Scotland	1	U. S. of Columbia	2

Total from other Countries 20

Ages and Religious Denominations.

The limits of age in the General Course, 1917, ranged from 17 to 45 years. The average age was 22.

Anglican	55	Friends	5	No Religion	3
Baptist	17	Lutheran	3	Presbyterian	102
Congregational	4	Mennonite	1	Roman Catholic	6
Disciples of Christ	1	Methodist	90		

Degrees and Diplomas in Agriculture.

The following students graduated in 1917 with the degree of Bachelor of the Science of Agriculture (B.S.A.).

Alton, Ronald M., R.R. 1, Agincourt, Ont.
Austin, William J., R. R. 5, Simcoe, Ont.
Clark, Hugh W., Stouffville, Ont.
Davey, Arthur, Grimsby, Ont.
Elliott, David, Agincourt, Ont.
Evans, Oliver C., Box 477, Chilliwack, B.C.
Fancher, Philip L., Florence, Ont.
Fleming, Robert R., Orton, Ont.
Gardiner, Wm. F., Sarnia, Ont.
Griffin, Robert J., R.R. 1, Sarnia, Ont.
Guild, Austin W., Jordan Harbour, Ont.
Hearle, Eric, Forbes Ave., Guelph.
Lawson, Edward V., Lorneside Farm, R.R. 3, Goderich, Ont.
Marritt, William G., Keswick, Ont.
Martin, Irwin B., Bobcaygeon, Ont.

Merkley, Forby K., Williamsburg, Ont.
Murdoch, Frank G., "Aldie," Guelph, Ont.
McConkey, Oswald, Cayley, Alta.
McCready, Samuel B., O.A.C., Guelph.
MacKenzie, Alexander W., Bedford, N.S.
McKillican, Lyman W., St. Elmo, Ont.
Neale, John C., Lambeth, Ont.
Neff, Harry W., R.R. 1, Hamilton, Ont.
Redmond, Athol A., Dartmouth, N.S.
Schurman, David C., North Bedeque, P.E.I.
Skinner, Guy, St. Mary's, Ont.
Slack, Perry B., Claremont, Ont.
White, Arthur H., Sardis, B.C.
Zavitz, Raymond W., O.A.C., Guelph.

Recipients of Associate Diplomas, 1917.

Almey, John R., R.R. 3, Petrolia, Ont.
Atkin, Edward J., Box 382, Leamington, Ont.
Atkin, Ray, North Malden, Ont.
Aylsworth, David Fraser, Bath, Ont.
Barber, John S., Rossmore, Ont.
Brink, R. Alexander, Beachville, Ont.
Caldwell, Wm. C., Carp, Ont.
Campbell, C. A., R.R. 1, Marshville, Ont.
Clark, Andrew P., Tyvan, Sask.
Cook, Milford, R.R. 5, Brampton, Ont.
Crews, Kenneth W., Trenton, Ont.
Delamore, Arthur J., 240 East 22nd St., New York.
Frost, Arthur O., Hampton, Ont.
Goudie, Elton B., Hespeler, Ont.
Gowland, R. C., Fergus, Ont.
Grant, Gerald S., 9 Queen's Park, Port of Spain, Trinidad, B.W.I.
Gunn, Wallace R., Avonmore, Ont.
Halsey, Raymond H., 72 Orange St., Brooklyn, New York.
Higgins, J. R., Kemptville, Ont.
Hunter, Frederick G., 628 Huron St., Toronto.
Jackson, Angus B., Wallenstein, R.R. 2.
Jones, Thomas H., Fruitland, Ont.
Kezar, John H., Britannia Heights, Ont.
Kimball, Donald A., Cardinal, Ont.
Mason, G. R., Virgil, Ont.
Musgave, Arthur H., 48 Collier St., Toronto.
Munro, John B., Slate River Valley, Ont.
McCook, E. A., Campbellford, Ont.
McConkey, O., Cayley, Alta.
MacKenzie, Frederick C., 210 Liverpool St., Guelph.
McLean, John, Jarvis, Ont.
Odell, Frederick C., Calgarian Apts., 353 Frank St., Ottawa.
Oliver, Richard W., Queen St., Guelph.
Peters, William R., Uno Park, Ont.
Quail, Edward J., Edwards, Ont.
Rutter, Harry McGowan, 285 William St., Belleville, Ont.
Shales, John M., Box 49, Perth Rd., Ont.
Scouten, Walter, Wilton, Ont.
Sibbick, Glendon R., Richwood, Ont.
Steckle, John S., R.R. 2, Kitchener, Ont.
Stewart, Andrew M., Waba, Ont.
Stillwell, Erwin C., Merrickville, Ont.
Toole, Howard, Mount Albert, Ont.
Wadsworth, John, Lambeth, Ont.
Walker, C. V., R.R. 4, Malton, Ont.
Way, James I., 24 Gladstone Ave., St. Thomas, Ont.
Zavitz, Raymond W., O.A.C., Guelph.
Ziegler, Walter T., 24 Paulding Ave, Tarrytown, N.Y.

Professional Dairy School Certificates Issued During 1917.

Abbott, E. I., Dorchester, Ont.
Andress, A. L., c/o L. J. Looby, Dublin, Ont.
Bell, C. W., R.R. No. 1, Kincardine, Ont.

Beninger, L., Grand Valley, Ont.
Dennis, R. A., c/o Kerrwood Creamery, Strathroy, Ont.
Howell, W., Vittoria, Ont.
Keillor, S. E., Wallacetown, Ont.
Liddle, Chas., c/o Morgan House, Kincardine, Ont.
Lobban, H. F., c/o Toronto Creamery Co., 9-11 Church St., Toronto.
Macdonald, H. A., Malegnant Cove, N.S.
MacKay, J. A., Stellarton, N.S.
McLeod, D. E., Sterling Brook, N.S.
Misener, H. C., c/o Palm Creamery, Palmerston, Ont.
Pedersen, Oluf, Dublin, Ont.
Peterson, Peter, Bright, Ont.
Robinson, A., Arnprior, Ont.
Silcox, C. P., R.R. No. 3, Shedden, Ont.
Sproule, W. H., O.A.C., Guelph.

Manual Training Certificates, 1917.

Capel, John, Collingwood, Ont.
Casselman, Geo. K., Williamsburg, Ont.
Panton, W. D., R.R. 4, Fergus, Ont.
Weir, R. N., Guelph, Ont.

MEDALS, SCHOLARSHIPS AND PRIZES AWARDED, APRIL, 1917.

First Year Scholarships.

Scholarships of $20 in money were awarded for groups of subjects in First Year work as follows. Highest standing with a minimum of forty per cent. of the marks of each subject, and an aggregate of seventy-five per cent. of the total number of marks allotted to the subjects in the group:—

Group 1.—English and Mathematics—R. J. Lindsay, R.R. 3, Thorndale, Ont.
Group 2.—Animal Husbandry, Dairy, Field Husbandry, Veterinary Science—S. W. King, Hickson, Ont.
Group 3.—Botany, Chemistry, Geology, Manual Training, Physics, Zoology—D. S. Maynard, R.R. 3, Chatham.
Group 4.—Apiculture, Horticulture, Poultry—W. C. Hopper, Westboro, Ont.

The George Chapman Scholarship.

(A prize of $20 in books awarded on the work in English of the first two years.)

The three divisions of the work under the English Department are taken into consideration in awarding the prize, namely, English Literature, English Composition and Public Speaking. Winner in 1917—J. M. Shales, Perth Road, Ont.

Prizes.

Four prizes of the value of $10 each in books were awarded as follows:—

Two to second year students who composed and read before a committee the best essays submitted by the class—J. R. Almey, R.R. 3, Petrolea, Ont., and R. A. Brink, Beachville, Ont.

One to the student who ranked highest in general proficiency and obtained first-class honors in his major subjects in the fourth year—A. W. MacKenzie, Bedford, N.S.

Canada Industrial Scholarships.

First—$50—S. B. McCready, Guelph, Ont.
Second—$30—J. C. Neale, Lambeth, Ont.
Third—$20—J. M. Shales, Perth Road, Ont.

Medals.

'05 Gold Medal.—Awarded to the Fourth Year student, who, by vote of the class, is declared to be the best "all-round" man in his year. Winner—J. C. Neale, Lambeth, Ont.

Governor-General's Silver Medal.—First in general proficiency, first and second year work, 1916-17. Winner—J. M. Shales, Perth Road.

New Bulletins Issued During 1917 by the College Staff.

No. 243.—(Revised 124) Nature Study or Stories in Agriculture	Members of the Staff.
No. 245.—Food Values	Prof. R. Harcourt.
No. 246.—Suggestions on Feeding Stock	Prof. G. E. Day.
No. 247.—(Revised 217) Farm Poultry	Prof. W. R. Graham, F. N. Marcellus, B.S.A.
No. 250.—Insects Attacking Fruit Trees	Lawson Caesar, B.A., B.S.A.
No. 251.—Insects Affecting Vegetables	Dr. C. J. S. Bethune.
No. 253.—Dairy Cattle	A. Leitch, B.S.A., H. M. King, B.S.A., J. P. Sackville, B.S.A.
No. 255.—Tuberculosis of Poultry in Ontario	Prof. D. H. Jones.
No. 256.—The Wintering of Bees in Ontario	Morley Pettit.

Changes in Staff.

Mr. Morley Pettit who for years has been Lecturer in Apiculture at the College, and who has not been in the best of health in recent years, resigned his position that he might spend his winters in Florida.

J. R. Spry, B.S.A., Lecturer in Physics, was selected by the Provincial Secretary to take charge of the Government Farms throughout Ontario in succession to S. E. Todd, B.S.A.

H. S. Fry, B.S.A., Demonstrator in Horticulture, resigned to take the Editorship of the *Canadian Countryman.*

A. V. Mitchener retired from the Resident Mastership to enter the Graduating Class of the College.

From the staff, also, the following men have enlisted during the year:—

C. W. Stanley, B.S.A., Soil Investigations.
G. F. Kingsmill, B.S.A., Demonstrator in Apiculture.
R. J. Skelton, B.S.A., Demonstrator in Dairying.
K. W. Forman, Instructor in Athletics.

The following appointments or promotions have been made to fill vacancies:—

R. C. Moffat, M.A., Lecturer in Physics.
Eric Hearle, B.S.A., Resident Master and Instructor in English.
A. H. Musgrave, Instructor in Athletics.
Miss Rona Fraser, Supervisor of House Practice.
Miss E. J. Rogers, Demonstrator in Laundry and Household Administration.
Miss H. Theodora Job, Instructor in Normal Methods..

T. H. Lund, B.S.A., Lecturer in Bacteriology, and W. H. Wright, B.S.A., Demonstrator in Botany, who enlisted for active service in 1915, have returned to Canada and have resumed their positions at the College.

Summer Schools.

The number of teachers coming to us by arrangement of the Educational Department is increasing each year. The past summer we had as many as 278, and for the summer of 1918, the Department of Education have asked us to prepare for 400 teachers and inspectors. This is important work and it seems to be the best way of introducing Agriculture into the Common Schools. The present arrangement has worked out satisfactorily so far, but the term is too short to accomplish very much in agricultural instruction, and it is beginning to cut in extensively on the time of our professors and instructors who need the summer for work in experimentation and demonstration.

Farmers' Excursions.

No excursions were held in June of this year for the reason that the railways could not spare any trains for this purpose. We hope when transportation facilities become more reasonable to inaugurate again the Farmers' Excursions to this College. I believe that in the past much instruction has been received by farmers visiting the College and Experimental Farm, and I know that the College has derived much benefit from the criticism of the farmers who came here, and from the hundreds of letters that were afterwards written as a result of their visit.

Rural Leadership.

There seems to be a feeling in country places that under present conditions the farmer is not getting a fair show in the way of either entertainment or instruction. There is a feeling in the country in many places that there is not much social life, that the old singing school, corn husking, various bees, such as log rolling and quilting, debating societies, and the grange have all been pretty well done away with, and that nothing has sprung up in their place.

Preachers and teachers and others all complain that life in the country is becoming more monotonous all the time.

With the idea, therefore, of finding out what was wrong and trying to meet the situation to some extent, we have for two seasons held a rural conference at the College in the summer time to discuss matters of improving social life in the country.

In the summer of 1917 we were surprised to find 120 thoughtful men and women who, at considerable sacrifice, came here and spent two weeks carrying out the programme which follows:—

Tuesday, July 24th.

Time Table will be the same till Saturday, July 28th.

9.00 a.m.—The Country School—H. W. Foght.
10.00 a.m.—Community Leadership—A. Maclaren.
11.00 a.m.—Seminar on Country Church Problems:—

1. The Mission and Message of the Country Church—Rev. W. K. Shearer.
2. Methods of Presenting and Working out No. 1—Rev. W. K. Shearer.
3. The Organization of Church Work in a Rural Community—Rev. W. Conway.
4. Place and Functions of the Various Church Organizations—Rev. W. Conway.
5. A Series of Community Life Institutes, one in each County—A. Maclaren, R. S. Duncan, G. A. Putnam.

2.00 p.m.—Field Husbandry—Prof. C. A. Zavitz, Visit to Experimental Plots on Friday afternoon.
3.00 p.m.—Co-operation and Marketing—F. C. Hart.
4.00 p.m.—Recreation Period.
6.30 p.m.—Organized Leagues of Baseball, etc., will be scheduled. Everybody plays.
8.00 p.m.—Illustrated Lectures on the Country School—H. W. Foght.
General singing will be conducted at the beginning of the lectures.

On Saturday afternoon Mr. Duncan will speak on District Representative Work, and Mr. G. A. Putnam on The County Board of Agriculture. The Conference on Community Life Institutes may be continued Saturday evening. Don't fail to be present for that discussion, as it is liable to be the most important of all sessions.

SATURDAY, JULY 28TH, AND SUNDAY, JULY 29TH.

A special two day Conference on Community Life Interests will be held during these two days. Anyone unable to take a longer time at the school should at least try to attend these two days. The Saturday programme will be as above. The Sunday sessions of the Conference will be on "A Country Church Movement in Ontario." Is it feasible? What steps can be taken to organize it?

MONDAY, JULY 30TH.

Time Table will be the same to close of School.

9.00 a.m.—Seminar on Country Church Problems:—
1. Financial Needs of the Country Church—Rev. G. W. Tebbs.
2. Securing the Finances—Business Administration—Rev. G. W. Tebbs.
3. 4. 5. Three blank periods will be reserved for discussion of topics suggested during the School.

10.00 a.m.—Community Leadership—A. Maclaren.
11.00 a.m.—Vegetable Gardening—A. H. MacLennan.
2.00 p.m.—Beautifying the Home Grounds—A. H. Tomlinson.
3.00 p.m.—Poultry Husbandry—Prof. W. R. Graham.
4.00 p.m.—Recreation.

SPECIAL AFTERNOON LECTURES FOR WOMEN.

2-4 p.m. Each Day.

Tuesday, July 24—Fancy Soft Cheese Making for the Home—Miss B. Millar.
Wednesday, July 25—(*a*) Women's Institute Work—General Outline. (*b*) Camp Fire Girl's Work—A. Maclaren.
Thursday, July 26—Butter Making in the Home—Miss B. Millar.
Friday, July 27—Visit to the Experimental Plots.
Saturday, July 28—Community Life Institute.
Sunday, July 29—A Country Church Movement in Ontario.
Monday, July 30—Women's Institute Work, Medical Inspection of School Children.
Tuesday, July 31—Fancy Soft Cheese Making.
Wednesday, Aug. 1—Women's Institute Work. Demonstration Lecture Work.
Friday, Aug. 3—Visit to Macdonald Institute and Hall.
Thursday, Aug. 2—Butter Making in the Home.

A Children's Play, "Alice in Wonderland," a Pageant entitled "The Call of the Country," and also a play illustrating the possibilities of Drama in Community Life, entitled, "Back to the Farm," will be given some time during the School.

BIBLIOGRAPHY ON RURAL LIFE.

The Rural Church.

The Country Church Movement—Earp.
Country Church and the Rural Problem—Butterfield.
Story of John Frederick Oberlin—Beard.
Teens and the Rural Sunday School—Alexander.
Church at the Centre—Wilson.
Making of a Country Parish—Mills.
The Kingdom and the Farm—Feeman.

Dairying.

Farm Dairying—Laura Rose Stephens.
Canadian Dairying—H. H. Dean.

The Rural School.

The American Rural School—Foght.
Rural Life and Education—Cobberley.
Among Country Schools—Kern.

Recreation.

Play and Recreation for the Open Country—Curtis.
Games for Playground, Home, School and Gymnasium—Bancroft.
Plays and Games for Schools—C. P. Cary, Wisconsin State Department of Education.
Education by Games and Plays—Johnson.
Folk Festivals—Mary Master Needham.
Scout Masters' and Boy Scouts' Handbooks.
Neighborhood Entertainments—R. B. Stern.

General.

The Challenge of the Country—Fishe.
Chapters in Rural Progress—Butterfield.
Evolution of the Country Community—Wilson.
Rural Life in Canada—McDougal.
Studies in Rural Citizenship—Woodsworth.
Rural Manhood—Periodical issued by Y.M.C.A., 124 East 28th Street, New York.

Purpose of the School.

To provide a course of instruction and training for all those interested in the re-direction of Rural Life along Economic, Social, Educative, Religious and Recreative lines. It will be suited to all types of rural leaders.

The course is intended for both men and women and especially for rural ministers and their wives, officers of men's brotherhoods and other religious organizations, boy scout masters, school superintendents, principals, and teachers, editors, officers of granges, institute lecturers and officers and any other persons who occupy positions of leadership and influence in the open country.

Again, the purpose of the School is to bring together active rural social and religious workers for conference and interchange of ideas, to the end that there may be built up an intelligent, comprehensive and co-ordinated scheme for rural betterment, and that the many agencies may be led to define their particular functions so that all may work together harmoniously and with a minimum of waste and duplication. Because of the varied lines of work represented by those in attendance, the opportunity for conference is one of the most attractive features of the School.

Pastimes.

Every afternoon from 4 to 6 o'clock will be set aside for recreation, when volley-ball, baseball, tennis, lawn bowling, and other games will be organized, and everyone will have an opportunity to join in some play. Instruction in athletics and games will be given. League games will be conducted at 6.30 every evening.

Special Lectures for Women Students.

In order to meet the needs of women students who attend the Summer School we have this year arranged for special lectures for them. These lectures will include soft-cheese making, butter making, vegetable gardening, beautifying the home grounds, camp fire-girl work, and domestic science.

The Courses of Instruction.

1. The Rural School: This course will deal with modern Rural School Practice, including administration, maintenance, curriculum, teachers, consolidation, etc. Its inter-relation with other rural organizations will be considered. 10 Lectures—H. W. Foght.

2. Community Leadership: Will deal with various problems in rural life demanding leadership—what it is, how to discover leaders, how to train them, etc. 10 Lectures —A. Maclaren.

3. Seminar Periods on the Rural Church: These will be round table discussions, when a leader will be appointed to open up the discussions, and all will be asked to take part in the discussions. 10 periods led by various leaders (see programme).

4. Problems of Field Husbandry: Will take up the questions of good seeds, varieties, experimental results among all kinds of farm crops. Two hours will be spent on the experimental plots, examining the experiments under way and discussing their results. 4 Periods—Prof. C. A. Zavitz.

5. Poultry Husbandry: This course will include lectures on the care and management of the flock for home use as well as some of the wider problems of the Poultry Industry in Ontario. 5 Lectures—Prof. W. R. Graham.

6. Rural Economics: Two lectures intended to give a bird's-eye view of some of the pressing economic problems facing the farmers of to-day in Ontario. 2 Lectures—F. C. Hart.

7. Beautifying the Home Grounds: Will discuss lawn making, planting, material to use, proper arrangement of material, propagation of flowering shrubs, etc. This course will be given by practical demonstration and lantern lectures as far as possible. 5 Lectures—A. H. Tomlinson.

8. The Home Vegetable Garden: It is planned to give an understanding of the various vegetables, their table qualities, propagation, etc. The lecture will be accompanied with demonstrations and lantern talks. 5 Lectures—A. H. MacLennan.

9. Soft-Cheese Making and Butter Making for the Home: Various makes of fancy soft-cheese which can be made at home will be demonstrated as well as methods of butter making. Two two-hour periods on each—Miss B. Millar.

I sincerely trust that much good will result from this conference, for there is no reason why life in the country places should be more monotonous than that of our towns and cities, providing people are properly organized for social effort.

G. C. Creelman,

President.

WORK OF THE DEPARTMENTS

CHEMISTRY.

The examination of materials sent to us by farmers and others throughout the Province and the correspondence in connection with these, entails the expenditure of a good deal of our time. The last year we have examined several hundred samples of various kinds.

Soils.

The interest in soil work is very marked and seems to be growing. This may be due to the call for greater production. We have examined a large number of samples of soil sent in by town and city men, who have wanted to produce something on their small lots. Some of these soils were so poor that the possibilities are that there would be some disappointments ahead of the amateur grower. In general, regarding soils, I have tried to emphasize the needs of decaying organic matter and the presence of an abundance of lime as two factors that are fundamental in the working of any soil and that it is only when these constituents are present in abundance that we can hope to get the best results from the application of expensive fertilizers.

Wheat and Flour.

We have spent some time in the study of the new crop of wheat. Both our Ontario winter wheat and the wheat from the West are grading high. The western wheat is also a very free milling wheat and is giving a good yield of flour and what is also important, it mills so freely that the flour mills are able to turn out a great deal more flour per day than they could last year.

The chemical and baking tests of flour made from the wheats received during the early part of the season indicate that the quality of the flour was not equal to that made from last year's crop. Some of the tests made on samples of wheat received as late as the middle of November show a decided improvement. These later samples probably more truly represent the crop as a whole. If this be true the difficulties the bakers are now experiencing in using the new flour will disappear as the season advances.

As in previous years we have milled all the various wheats grown by the Department of Field Husbandry and baked the flours obtained. This work was done with the view of assisting the Field Husbandry Department to arrive at a conclusion as to which was the best quality of wheat.

We have spent considerable time in making baking tests of the flour from rye, barley, oats, buckwheat and corn, as a partial substitute for wheat flour in the making of bread. In the case of rye, barley and buckwheat, as much as 25 per cent. of the flour may be used with the wheat flour without seriously affecting the appearance of the loaf. Twenty-five per cent. of the oat flour decreases the size of the loaf very much but the bread has a nice flavor.

Our exhibit at Toronto Exhibition, of breads made with these various substitutes attracted a great deal of attention and many favorable comments. Even if only 10 per cent. of these flours were used as a substitute in making a standard war loaf an immense saving of wheat would be effected. It is very doubtful, however, if the commercial bakers can make much use of these flours unless it was made compulsory; because, while the bread has a good flavor it is not equal in appearance to that made from all wheat flour. These flours may be used in home baking, and I believe in many cases they would be used freely as substitutes if they were more readily procurable.

A barley flour can be readily made with the ordinary flour mill equipment and by much the same process, and is giving very satisfactory results. Buckwheat also furnishes a splendid wheat flour substitute and is not difficult to prepare. A little concerted action is very necessary to bring these flours on the market in sufficient quantity to supply the growing demand.

Soil Survey.

In connection with our Soil Survey I would say that we have covered, in the preliminary survey, all the territory as far east as Kingston.

In the main, west of the escarpment in the neighborhood of Milton the soil is derived largely from limestone and lies over limestone. East of the escarpment and extending as far as Bowmanville the soil is derived from and lies over sandstones and shales. This soil is naturally more deficient in lime and its application is consequently of fundamental importance. From Bowmanville to Belleville the soil is similar to that west of the escarpment; excepting that it is more largely of the lighter classes. The soil of the area between Belleville and Kingston is very shallow. It overlies limestone and in this respect is similar to that of Western Ontario; but it is so shallow that it presents entirely different

cultural problems. Immediately east of this area, that is, east of Kingston, the soil lies over precambrian rock, which is lacking in lime and consequently has a tendency to become sour.

We have sampled the soils of the various types in these areas and have some of the work of the analyses completed. The maps are now ready for the printer.

Our demonstration plots on this farm gave us some excellent results this year. For instance the increased yield of mangels on plots treated with fertilizers was from 75 to 90 per cent. greater than on the manured but not fertilized check plots. Phosphates are particularly needed by this type of soil. No results were secured from the Walsh plots this year as the greater part of the area was covered with water for some time after the growing season was well advanced.

We have spent some time in locating places for demonstration plots on other types of soil. It is very essential that these plots be in typical soil and much care must be exercised in their situation.

Lime and Phosphates.

Preliminary and as adjuncts to the demonstration plots we have placed a few experiments with lime and phosphates. These are apparently the two mineral constituents most needed by our soils.

The lime experiments laid down in the neighborhood of Leamington, Welland and Milton have again clearly shown the necessity of adding lime to these soils. It wonderfully improves the physical state of the soil and increases the yield. Lime was applied on these plots at the rate of from one to ten tons per acre and ground limestone from two to twenty tons per acre. It is our intention to note the effect of these applications over a number of years.

The phosphate experiments have been placed in the neighborhood of Milton and Seaforth. The soil in these centres we know needs phosphate, and we have placed several experiments with the object of getting some information regarding the best form of phosphate to use. The effect of the application will be watched over a term of years. It is worthy of note that at Seaforth phosphate alone increased the yield of turnips as much as 33 per cent. The cost of the phosphate was five dollars per acre, and the value of the increased yield was fifty dollars. This shows something of the possibilities of the work that may be accomplished in demonstrating the effect of phosphate on this type of soil—and it covers a large area. Other types have their special characteristics and we hope to reach these as time permits. It is our intention to follow these preliminary experiments with the more permanent demonstration plots when we will be able to work out in more detail the problems characteristic of the soil. At the present time when increased crop production is so important the right use of these costly fertilizers is important.

Potash is practically inprocurable and imported forms of nitrogen are very expensive and so we are forced back to the use of phosphatic fertilizers and organic forms of nitrogen, such as is got from the packing houses. In many ways I do not consider this any great hardship. for lime and organic matter form the foundations of all arable soil and phosphoric acid and nitrogen come next in importance.

ENTOMOLOGY.

Insects of the Season.

This year has not been marked by any widespread outbreak of destructive insects, and only a few species have been unusually abundant. Plant-lice, cut-worms, white grubs and wire-worms, which we always have with us, were seldom complained of in comparison with other years. The severity of the past winter and the unusual lateness of spring and summer were no doubt important factors in the reduction of insect life of all kinds, both of those regarded as of economic importance and of the vast variety of species that may be considered neutral as far as the fruit grower and farmer are concerned.

The Wheat-midge (*Diplosis tritici*), which was reported last year from the County of Elgin, has made its unwelcome appearance in Wentworth, Lincoln and Welland Counties during the past season. In most cases the attack was not very severe, but it was sufficient to cause much alarm among the farmers in those parts of the Province. The parent fly is a very small, two-winged insect, about an eighth of an inch in length, with a yellow or orange colored body. It lays its eggs, when the ears are formed on the growing grain, at the tip of the chaff covering the soft kernel. In about a week there hatch from these eggs small dark red maggots, which enter the grain and feed on its milky contents, leaving only a shrivelled husk. When full-grown the maggot descends to the ground and buries itself a few inches below the surface; soon after it changes to the pupal stage and remains torpid during the winter. It is evident that nothing can be done to destroy the maggot when feeding in the ear, it remains, therefore, to guard against future attacks. For this purpose it is most important to sweep up and burn at once all chaff and refuse from the threshing machine, which will contain many of the insects. If practicable the stubble in the field should be burned over, and in any case the field should be deeply plowed in order to bury the wintering puparia so deeply that the flies will be unable to emerge next year. Rolling the ground after plowing will help materially to produce this result. No wheat should be grown on the same field or very near it for one or two seasons.

When the Midge was so terribly destructive some fifty or more years ago, it was found that certain varieties of wheat were "Midge-proof," due to the flinty character of the straw and the chaff covering the grain which were too hard for the newly-hatched maggot to penetrate. Their general adoption at that time caused the Midge to become practically extinct. It would be well for farmers in the localities affected to sow next year only such varieties of wheat as are likely to possess this resistant quality. The Red Fife is the one that was most widely sown at the time referred to and may be recommended now.

During the months of August and September several caterpillars were unusually abundant and destructive. On walnut and butternut trees the Checkered Tussock-worm (*Datana integerrima*) appeared in great numbers, defoliating the branches on which they were clustered and doing a considerable amount of damage. Red-humped Caterpillars (*Schizura concinna*) were found in multitudes on a great variety of fruit trees in many parts of the Province. As spraying with arsenical poisons could not safely be performed when trees are laden with fruit, another simple method of removing both of these pests is to jar them off by striking the branches where they are feeding several sharp blows with a stout stick, which will cause them to fall to the ground, where they can be crushed underfoot.

Another unusual caterpillar outbreak was the appearance in great numbers on cabbages, beets, turnips and other vegetables, of the Zebra caterpillar (*Mamestra picta*), a strikingly marked black and yellow creature. In most cases it may be controlled by spraying with the usual poisons, but in the case of cabbages and cauliflowers these would be dangerous to employ and recourse should be had to hellebore or pyrethrum insect powder.

The Tent caterpillars, which have been very abundant and destructive during the last few years, are now much reduced in numbers. The "Forest" species, however, is still ravaging the woodlands in Northern Ontario.

Many gardeners have been growing various biennial vegetables in order to procure a supply of seed for future use. Much disappointment has been caused by the destruction of the flowers of parsnips by the caterpillars of a very small moth (*Depressaria heracliana*). They appear in great numbers and cover the umbels of the flowers with an untidy web, within which they carry on their work of devouring the bloom; later on they bore into the stems and feed upon the soft pith, changing into the chrysalis stage. Usually the attack is not noticed until much damage has been inflicted and it is too late to save the crop of seed. All affected heads should be cut off and burned, and any wild parsnips or other umbelliferous plants growing near should be cut down and destroyed.

"Spittle insects" were again very numerous during the early summer; slugs also were much complained of in damp, shady city gardens. In greenhouses the caterpillars, called Leaf-tiers, of a small moth (*Phlyctaenia ferrugalis*) have been very troublesome on chrysanthemums, and the Boston Fern Scale (*Hemichionaspis aspidistrae*) has made its unwelcome appearance in some conservatories.

Among household pests the so-called "Silver-fish" (*Lepisma*) has been found damaging wall-paper, the binding of books and some starchy foods. Experiments were made for its destruction with Sodium fluoride, which proved quite successful. The same material was found to be an excellent cockroach exterminator.

During the autumn hunting season many rabbits were found to be affected with the large black maggot of the Rabbit Bot-fly (*Cuterebra caniculi*). The two-winged adult somewhat resembles a Bumble-bee. The eggs are laid in the mouth or nostrils of the animal and the maggot works its way into the throat and up to the back where it produces large tumors or warbles under the skin. Though the attack may not be fatal, it must cause great discomfort to the unfortunate animal.

Mr. A. W. Baker continued during the summer months his experiments for the relief of cattle from the attacks of Horn-flies and Stable-flies. His investigations showed that of home-made repellents the following gave the most satisfactory results: Fish-oil, one gallon; hot soap solution, using half a cake of ordinary laundry soap, one gallon; kerosene oil, one gallon; slightly sour milk, one gallon; the fish-oil and soap solution are thoroughly mixed together, and then the kerosene oil and milk together; the whole is next combined and well agitated; when cold six ounces of oil of citronella are stirred in. This forms the stock solution and is used in spraying in the proportion of one part to two of water. The cost of the mixture is about 15 cents per gallon. Spraying should be done with a cheap hand garden sprayer of the atomizer type. Working with these sprayers two men should be able to spray a herd of thirty cows in from twenty minutes to half an hour. Spraying should be done each morning before milking. Experiments this year showed a difference of 50 per cent., as proved by milk production, in favor of morning spraying as compared with that done in the afternoon. It is important that the whole animal should be covered with

the repellent. The result of this year's experiments showed that daily morning spraying during the fly season as outlined above increased the milk production of the cows treated by about four per cent., to say nothing of the improved health and comfort of the animals. Full details of the experiments were given in a paper read by Mr. Baker at the recent Annual Meeting of the Entomological Society of Ontario, and will be published in its forthcoming report. The work will be continued next summer, when it is hoped that still better results will be obtained, and experiments will also be carried on respecting the control of these flies and other pests of domestic animals.

Field and Investigation Work.

The field and investigation work of the year was as follows:—

(1) *Dusting versus spraying for the control of fruit tree insects and plant diseases.* A second year's test of the dust method has now been made. Two apple orchards, each of about six acres in extent and situated in the Grimsby district, were selected for the purpose. Approximately one-fourth of each orchard was treated throughout (three sprayings) with the liquid spray, lime-sulphur and arsenate of lead, on the dates and with the strength recommended in our Spray Calendar. The remainder (except 48 trees in one orchard) received a heavy dormant or semi-dormant spray with lime-sulphur for San José Scale and then was dusted just before and just after the blossoms fell. Fifty-three trees in one orchard received a third dusting three weeks after blossoms fell, the chief object being to see the effect of the late application on Codling Moth.

The forty-eight trees mentioned above were dusted while still dormant with a dust composed of finely ground sodium sulphide and talc, to test the value of this mixture upon San José Scale.

Results on Apple Scab. In the one orchard, having a crop of approximately 200 barrels, both the liquid and the dusted portions were almost totally free from Scab, there being less than 1 per cent. of Scab on either portion. This was true even of dusted Snow apples. Check Snow trees showed over 90 per cent. scabby fruit, and Greenings and Baldwins averaged over 50 per cent.

In the other orchard the ground was very rough, making dusting very difficult and dangerous. The crop was also light—only about 30 barrels. In this orchard there was an average of 99 per cent. of Scab-free fruit on the sprayed portion and of about 90 per cent. on the dusted portion. So that in this case the liquid was superior.

Results on Codling Moth. In neither orchard could we see any difference in the effectiveness of dusting and spraying for this insect. Owing to the smallness of the crop in the second orchard (30 barrels to 6 acres) these insects centred on the individual fruits, with the result that nearly 50 per cent. of the apples were wormy. In the other orchard where the crop was larger, though still a light one (200 barrels to six acres), the percentage of worms on the parts that received only one application for Codling Moth, namely, the one after the blossoms fell, was between 25 per cent. and 33 per cent.; but on the 53 trees that received an extra application of the dust this was reduced to between 8 per cent. and 10 per cent. This shows very clearly that this year a late application for Codling Moth paid well. The same results on this insect were observed in other orchards visited during the year.

Results on San José Scale. Much to the writer's surprise, the sodium sulphide and talc dust completely controlled this scale on the 48 trees dusted,

though some of them had been badly infested. Whether it would do so every year if well applied is open to question. Great pains were, of course, taken to do the work most thoroughly and to give the dust every chance.

Results of Dusting in other parts of the Province. Several apple orchards where dust had been used were visited, but in all of these the results were somewhat disappointing so far as Scab control went. In some cases a portion of the orchard had been treated with the liquid and this portion was noticeably freer from Scab. In all cases the dust appeared to have controlled Codling Moth as well as the liquid spray.

General Conclusions Regarding Dust for Apple Orchard. In spite of the satisfactory results obtained by the writer last year and again this year, his opinion is that it is very doubtful whether the average fruit grower would not make a mistake in substituting dusting for spraying. Lack of labor during the war may, of course, make it advisable to dust in large apple orchards because of the very much greater rapidity and ease with which an orchard can be treated with dust than with spray.

(2) *Control of Brown Rot on Sweet Cherries.* During the last two years a study has been made of how to improve upon the methods of controlling this very destructive disease of sweet cherries. We believe that we have now discovered a satisfactory method which is as follows: Spray the trees first a day or two before the buds burst with lime-sulphur, strength 1.035 sp. gr. (nicotine sulphate may be added to control Aphids). Spray again with lime-sulphur, strength 1.008 sp. gr. plus 3 lbs. arsenate of lead to every 40 gals. of the liquid, as soon as all parts of the blossoms have fallen and left the fruits naked. Use the same mixture again just as the cherries are beginning to color. Bordeaux and arsenate of lead may be substituted for lime-sulphur and arsenate of lead in the second and third applications. Lastly, dust the trees with finely ground sulphur and talc (without any poison) two or three days before picking begins. This last treatment is the chief improvement upon the older methods for it enables a fungicide to be applied at the very time when there is usually the greatest need and yet does not stain the fruit or make it dangerous to consumers through the presence of poison. By this method of treatment this year we were able to save almost the entire crop in two good orchards of about 100 trees each. There is no doubt, as shown by check trees, that otherwise most of fruit would have rotted; for the season was very favorable to the development of Brown Rot. This method of treatment implies, of course, the possession of a duster, but one such machine would suffice for at least ten fruit growers and could be used also for dusting grapes.

The general adoption of this method would, in at least some seasons, mean an increased return of several thousands of dollars to cherry growers. The method could be extended to include varieties of plums that are very susceptible to rot.

(3) *Pear Blight.* This is now the fifth year's test of the field control of this disease in pear orchards. This year over thirty acres of pears were under our charge. The results obtained during these five years show that at least with the weather conditions that have prevailed and under the sort of surroundings to be found in the Niagara district, it is quite possible to control satisfactorily this very destructive and much dreaded disease. The cost of treatment has not been at all high, so that expense need not deter any man. Experience has shown us that most failures to control the disease are due to three or four causes, the chief of which are: entrusting the work to the wrong man or men: failure to

remove the blighted branches or hold-over blight in late autumn, winter or very early spring before sap movement begins; failure to remove blossom blight promptly after it becomes visible, and failure to disinfect cuts and tools.

We hope to publish before spring a small bulletin to guide pear growers in the treatment of the disease.

(4) *Zebra Caterpillar.* In September, numerous cases of this yellow and black-striped caterpillar feeding in great numbers upon turnip leaves were reported. In quite a few instances the plants were completely defoliated. Tests of control measures were at once begun. It was found that best results could be obtained by dusting the plants with Paris green diluted with about thirty times its own bulk of air-slaked lime or hydrated lime or land plaster. This was much more satisfactory than spraying, as the liquid in the latter case did not remain evenly distributed over the leaves but ran down their glossy surface and collected in depressed areas. A circular letter giving the method of control was sent to each District Representative, to the agricultural journals and the chief Toronto newspapers.

(5) *Blackberry Leaf-miner.* This leaf-miner is the larva of a small, black, four-winged fly, known as a sawfly. It sometimes becomes so abundant as to destroy by its mines between the upper and lower surface of the leaf a large proportion of the foliage in infested fields. In such a case the bushes look as if they had been struck by some devastating blight. Growers of blackberries have very naturally been much alarmed by the injury to the leaves. We had been devoting some attention to this pest off and on for several years and had tested the measures recommended by entomologists and also several other remedies, all of which aimed at destroying the larvæ or pupæ. None of these measures, however, were found satisfactory. Fortunately, we discovered this autumn that the adults, contrary to what was believed, could be poisoned with arsenate of lead. Plans are already being made to work out all the details of this new method next year so that explicit, well tested directions may be given to the growers.

(6) *Apple Maggot or Railroad Worm.* Further laboratory study on the effect of insecticides upon the adults of this pest have been made by the writer, and these have been backed up by spraying experiments on orchards near Brockville and Trenton respectively. The spray work was done in co-operation with Mr. W. A. Ross, of the Entomological Branch, Ottawa, but the laboratory tests were done by the writer. Both laboratory and field work gave further proof that this troublesome insect can be readily controlled by spraying with arsenate of lead applied when the adults begin to appear and repeated two weeks later. Almost all data required for a full account of the life-history and control of the insect has been accumulated, but the war may make it desirable to postpone publication for another year.

(7) *San José Scale.* Some further study of the life-history and degree of parasitism of this pest has been made, and also of the distance to which its larvæ may be blown by the wind. It was found that parasites were much more abundant than suspected. Mr. Flock, the writer's assistant, from sixty twigs each about nine inches long and averaging from one-third to one-half an inch in diameter reared approximately 2,000 individual parasites, most of them of the species *Prospaltella perniciosi,* Tower. About three years ago we imported a number of these and other parasites into the Niagara district, but whether those now at work are the result of that act or the natural distribution of and increase of the species is difficult to determine.

In testing the distance the larvæ may be carried by the wind there was only

a moderate breeze on the days that could be devoted to this work. In such a breeze it was found that some were carried 50 feet. There is, therefore, no doubt that with a much stronger wind they would be carried a good deal further. It is aimed to test this method much more fully next year, as it is important in connection with control measures and especially in the case of nursery stock.

(8) *Wheat Midge.* Although the writer was absent in Eastern Ontario at the time of the chief excitement over the Wheat Midge, yet on his return at the end of July he at once visited wheat fields in the known infested counties and also fields in other counties. The midge seemed to be limited chiefly to the Counties of Wentworth, Lincoln, Haldimand and Welland. In these, even in the worst infested fields, the loss was not nearly so high as feared and would not exceed 10 per cent. of the crop and possibly not even 5 per cent. It was true that a large percentage of the heads had larvæ in them, but only a small percentage of grains in each head were affected. Many of the larvæ of the midge remained in the heads after the grain was ripe, cut and drawn to the barn. This suggests that control measures should take the form of burning the tailings from the threshing machine and plowing down deeply either in autumn or spring badly infested fields to bury the pupæ or larvæ that had entered the soil and so prevent the emergence of adults the next year.

(9) *Nurseries and Orchard Inspection.* This work has gone on as usual and there is nothing new to report from what was said last year, except that nurserymen are becoming more thorough in doing their part to help the inspectors to eradicate San José Scale from infested parts of the nurseries. The results have been gratifying.

(10) *Miscellaneous.* In addition to the regular work mentioned above, considerable progress was made in the study of the life-histories and means of control of the Pear Psylla, Plum Curculio, White-marked Tussock Moth, Slugs and Red-marked Agrilus (the last insect attacks and destroys raspberry and blackberry).

A new and very interesting nozzle invented by the Friend Manufacturing Co., Gasport, N.Y., was tested to some extent and promises to make spraying simpler and easier. The nozzle is known as the "Nu-System Spray Gun," and takes the place of the ordinary spray rod and nozzles. It also makes a tower for tall trees unnecessary. It is planned to test this new device very fully next year.

Some new insecticides have been tried during the year, but none seemed superior or quite so safe as those being used at present.

An attempt was made to find whether any variety of raspberry was immune to the destructive disease known as *Raspberry Yellows.* So far as could be determined the *Herbert* variety appears to be immune. It is a good yielding berry but the flavor of the fruit is not so good as that of the Cuthbert.

Publications.

The following publications have been issued during the current year:—

By Prof. Bethune: "Insects Affecting Vegetables," a revised edition of Bulletin 171, published in 1909; "The Wheat Midge," a press article sent to the agricultural papers and the country newspapers in the counties affected by this insect; a biographical sketch of Mr. Edmund Baynes Reed, one of the founders of the Entomological Society of Ontario (*Canadian Entomologist,* February, 1917); "Insect Collections of the Entomological Society of Ontario" (*Can. Ent.,* May, 1917).

By Prof. Caesar: "Insects Attacking Fruit Trees." Bulletin 250, an entirely new work, with many original illustrations; "The Plum Curculio" (*Canadian*

Entomologist, December, 1916, and January, 1917); "Dusting Fruit Trees and Grapes for the Control of Diseases and Biting Insects," and "Notes on some Insects of the Season" (47th Annual Report, Ent. Society of Ontario); "Fall Spraying of Apple Orchards" (*Canadian Countryman*); "Dusting for Tender Fruits and Apples" (48th Annual Report of the Ontario Fruit Growers' Association); "The White-marked Tussock Moth" (Ontario Fruit Branch Circular for October); "The Zebra Caterpillar," a press bulletin sent to the agricultural journals throughout the Province and the Toronto newspapers; "Insects Attacking the Pear" (Vineland Bulletin on the Pear); "Dusting Fruit Trees," (*Canadian Horticulturist*).

By Mr. Baker: "Preliminary Notes on the Use of Repellents for Horn-flies and Stable-flies of Cattle" (47th Annual Report Ent. Soc. of Ontario).

BOTANY.

Weeds.

Analysis of the correspondence during the past twelve months indicates that the following weeds have given the farmers of Ontario most trouble during the past year: Wild Mustard (*Brassica arvenis*), Field Bindweed (*Convolvulus arvenis*), Twitch Grass (*Agropyron repens*), Perennial Sow Thistle (*Sonchus arvenis*) and Bladder Campion (*Silene latifolia*).

The results of six years' experimental work make it possible for this Department to supply the farmers of Ontario with definite information for the best methods of suppressing all these weeds.

The methods recommended by the Department are those which have been tried out by farmers on their farms and found effective.

Purity Tests of Clover and Timothy Seed.

Purity tests according to the standard designated by the Seed Control Act were made of eighty-two samples of clover and timothy seed. Out of fifty-four samples of red clover seed, eleven graded No. 1, fifteen No. 2, eleven No. 3, and seventeen were disqualified. Out of fifteen samples of timothy seed, five graded No. 1, three No. 2, five No. 3, and two were disqualified. Out of eight samples of alsike, four graded No. 1, one No. 2, two No. 3, and one was disqualified. Of five samples of alfalfa, one graded No. 1, three No. 2, and one No. 3.

Fungus Diseases.

The prolonged wet weather of the early summer favored the development and spread of certain fungus diseases. Leaf spot of currants was particularly bad in the Niagara district, almost completely defoliating many currant bushes by the first of August.

Apple scab was very prevalent in unsprayed orchards and in orchards which were not thoroughly sprayed. Where timely and thorough spraying was done scab was prevented from causing any serious loss.

Another disease which was very prevalent in many parts of the Province this past season was blossom end rot or point rot of tomatoes. This is a so-called "physiological" disease, not being due to any organism but to some condition within the plant itself probably induced by its environment. The first symptom of

the trouble is the appearance of irregular, water-soaked areas near the tip of the fruit, usually when it is about half grown. These water-soaked areas later become flattened or sunken and dark green to dark brown in color, and of a hard, leathery texture. Various fungi and bacteria may gain entrance through these injured spots and induce rot, which may destroy the whole fruit.

There is very little exact knowledge concerning the cause or the control of this disease. Over-forcing of the plants, especially in the early stages of their development, irregular watering and heavy applications of farmyard manure seem to make the plants liable to develop the trouble. Outdoors it is usually worst on light, sandy soils.

Late blight and rot of potatoes (*Phytophthora infestans*) appeared early in July and threatened the destruction of many fields of potatoes, but was fortunately checked by the weather becoming dry towards the end of the month. There was another outbreak of late blight in September, but it did not become prevalent enough to cause a rotting of potatoes over any very extensive areas in the chief potato growing sections of the Province. Spraying to prevent late blight and rot should be more generally practised in Ontario. It is true that there are certain localities here and there throughout the Province where potatoes are grown on light soil where spraying for blight and rot does not appear to be necessary. The same thing is true of certain sections where only early varieties are grown in a commercial way. Taking the Province as a whole, however, spraying every year with Bordeaux mixture and Paris green or arsenate of lead is an insurance against late blight and rot and potato beetles, which few potato growers can afford to neglect. Commence spraying when the plants are from four to five inches high and keep the foliage covered with Bordeaux mixture throughout the season. Take special precautions to see that the spraying is very thoroughly done if the weather is at all damp about the 15th of July, as blight often begins at this time. Add a poison to each application when necessary for potato beetles—arsenate of lead, three and one-half pounds to each forty gallons of the liquid spray or Paris green, two pounds to forty gallons, or a mixture of two pounds of arsenate of lead paste and one pound of Paris green to forty gallons. From three to seven applications should be made, depending upon the season. The wetter the weather the larger the number. Do not hesitate to spray because it looks like rain. If blight is to be prevented the Bordeaux must be on the plants when the rain comes. If the Bordeaux is on the plants half an hour before the rain comes it will be dry and sufficient of it will stick to prevent infection, which takes place during or soon after rain. Spraying as described above should prevent not only late blight and rot, but also early blight and potato beetles. For late blight and rot only it is not necessary to commence spraying until about the first week in July, but in Ontario it is usually advisable to spray for all three.

Potato Diseases.

This fall the writer visited three of the chief potato growing sections of Old Ontario, namely Caradoc Township in Middlesex County, the Erin and Hillsburg district in Wellington County and the potato districts of Carleton County. An inspection for disease was made which revealed the fact that the so-called physiological diseases such as leaf roll, mosaic and curly dwarf are far too prevalent in Ontario. They are apparently to a very large extent responsible for the poor yields of potatoes obtained on many farms at the present time. Everybody, therefore, interested in the production of potatoes should know something about the seriousness

of these diseases, their symptoms, how they are spread and how loss from them may be prevented.

Leaf Roll. The cause of this disease is unknown. It has been observed in numerous fields in the potato-growing districts of Old Ontario. In some fields examined this summer (1917) over sixty per cent. of the plants were affected with leaf roll.

Experiments and observations show that leaf roll may reduce the yield to a very marked extent. In experiments conducted by Mr. Murphy, assistant in charge of the Dominion Laboratory of Plant Pathology at Charlottetown, P.E.I., it was found that the average yield of plants diseased with leaf roll in Prince Edward Island is 1.66 ozs., while healthy plants of the same variety yield 19.0 ozs. The corresponding yields per acre would be 26 bushels and 297 bushels.

Symptoms of leaf roll are very variable. Affected plants are always more or less dwarfed and in some varieties the leaves assume a characteristic upright, almost staring habit instead of drooping over in the normal way. This symptom is sometimes absent, the plants presenting instead a low headed, bushy appearance. When the crop is badly affected the poor growth of the foliage is very noticeable. It is practically never as green on affected plants as on healthy ones, and occasionally on certain varieties it takes on a purplish or reddish color at the tips and around the margins of the leaves. Rolling of the lower leaves is always associated with the disease. This is often rather inconspicuous and may not extend beyond the leaves lying close to the ground, although it may affect the intermediate and even the topmost leaves. Marked rolling of the upper leaves, however, is often seen on plants not affected with leaf roll. The rolled leaves on plants affected with this disease begin to die early. The harsh, leathery texture of such leaves is a constant symptom. This point may be tested by feeling them with the fingers. The tubers of affected plants are small and are borne generally on very short tuber-branches (stolons) or even attached in a cluster to the stem.

Leaf roll is chiefly transmitted through the seed. Tubers from affected plants invariably produce diseased plants. There is also evidence to show that the disease may spread from plant to plant in the field. Just how is unknown, as up to the present time no parasite has been found associated with leaf roll.

The surest way of avoiding loss from leaf roll is to secure fresh seed from districts free from the disease. Fortunately, this is possible, as Northern Ontario and certain sections of New Brunswick, Nova Scotia and Prince Edward Island are comparatively free from this trouble.

Mosaic. The cause of this disease is also unknown. It has been observed in many fields in Ontario. When it is severe there is a very noticeable reduction in the crop.

The foliage of plants affected with mosaic is somewhat wrinkled or corrugated and mottled, with faint, light green or yellowish spots. These symptoms vary considerably, being well marked in some cases and not so noticeable in others. The stalks of diseased plants are often more bare near the ground than those of healthy ones, partly because the affected foliage does not spread out and droop down normally and partly because the lower leaves sometimes fall off in the last stages of severe attacks. The tubers of affected plants are normal looking and sound and their keeping or eating qualities are not impaired.

Like leaf roll, mosaic is transmitted through the seed and is spread very largely by the use of seed from diseased plants. It is also spread from plant to plant in the field, probably by insects as is the case with related diseases.

If the disease is not very prevalent in a field, remove the affected plants so as to secure seed as free as possible from mosaic. If the mosaic is very abundant secure fresh seed from a field or district free from the disease. It may be necessary to discard susceptible varieties in order to avoid loss from mosaic.

Curly Dwarf. Another disease of unknown cause, frequently met with in Ontario, especially in unthrifty fields of potatoes. It appears to cause a very noticeable reduction in the crop. Plants affected with curly dwarf are dwarfed and the foliage is markedly curled and wrinkled. This disease is known to be transmitted through the seed.

Remove affected plants so as to secure seed free from curly dwarf or secure fresh seed from a field or district free from the disease.

Investigational Work.

During the past year the following research work has been carried on: Co-operative experiments in weed eradication; spraying with Bordeaux mixture and sulfocide to prevent late blight of celery; tests with formalin solution for the prevention of oat smut under field conditions; investigations of the cause and means of control of a peculiar disease of winter tomatoes; experiments in spraying to destroy dandelions; investigations to determine to what extent the fungus which causes late blight of celery is carried over on the seed; inspection of pines for white pine blister rust and studies of the life-history of the fungus *Peridermium strobi* which causes the disease.

Co-operative Experiments in Weed Eradication.

The results of six years' experiments, in which over sixty farmers co-operated, show clearly that the following methods can be successfully employed on the farms of Ontario for the control of perennial sow thistle, twitch grass, bladder campion and wild mustard.

The Use of Rape in the Destruction of Perennial Sow Thistle and Twitch Grass. Cultivate the field until about the middle of June, running over it frequently with the cultivator so as to keep the tops down and thus weaken the "roots." Then apply manure at the rate of about twenty tons per acre (twelve good loads). Cultivate the manure in thoroughly, and with a double mould board plow slightly ridge up the land, making the ridges about twenty-six inches apart. On the ridges sow pasture rape at the rate of one and one-half pounds per acre. It is important that the right amount of rape should be sown, for if too little is sown the stand will not be thick enough to smother the weeds, and if, on the other hand, too much is sown the plants will be too crowded and not grow vigorously enough to keep ahead of the thistle or twitch grass. Sow the rape when the land is sufficiently moist to insure quick germination of the seed. If the rape is slow in starting the sow thistle or twitch grass may get a start in the row and thus necessitate hand cultivation there. Cultivate the rape every week or ten days until it occupies all the ground and makes further cultivation impossible. If, when the rape is cut or pastured any sow thistle or twitch grass remains, the field should be ridged up the last thing in the fall and put in with a hoed crop the following year. This should not be necessary if a good stand of rape is secured.

A Method of Cultivation for the Eradication of Bladder Campion or Cow Bell. Badly infested fields should be plowed deeply and then thoroughly cultivated and

cross-cultivated with a broad-shared cultivator in order to break up and weaken the underground rootstocks. This cultivation should be given frequently enough to prevent the plants making any growth above ground until it is time to put in a hoed crop, which must be kept thoroughly clean in order to be effective. A well cared for crop of corn has been found to give excellent results. Special attention must be given to hoeing out any patches of bladder campion which may appear in the corn crop, and which are not destroyed by cultivation. If in the fall there is any bladder campion in the field, it will be necessary to plow fairly deeply and cultivate thoroughly, and the following spring repeat the frequent cultivation until it is time to put in a hoed crop. This second hoed crop should not be necessary under ordinary conditions. One spring's thorough cultivation, followed by a well-cared-for hoed crop should destroy practically all the bladder campion.

Spraying with Iron Sulphate to Destroy Mustard in Cereal Crops. Iron or copper sulphate can be successfully used to destroy mustard in standing grain without injury to the crop.

A twenty per cent. solution should be applied. This can be prepared by dissolving eighty pounds of iron sulphate in forty gallons of water. Iron sulphate is dissolved quite readily in cold water. The solution should be strained through a cheesecloth, as it is put into the spray pump tank. This will remove dirt and small particles that are apt to clog the nozzles.

Apply on a calm, clear day just as soon as the first few plants in the fields show flowers. *It is very important to spray early.* If the plants are left too long the treatment is not nearly so effective. If a heavy rain comes within twenty-four hours after the solution is applied it will be necessary to spray again.

An ordinary hand pump barrel sprayer, such as is employed to spray fruit trees may be used, or a potato sprayer can be rigged up to do the work. Many of the up-to-date potato sprayers have a special broadcast attachment for spraying weeds. These are excellent for large areas, as they cover a wide strip at each round. Care must be taken to see that every mustard plant is covered with the solution in the form of fine spray.

Iron sulphate may be obtained at any hardware store or from the Nichols Chemical Co., Toronto. In wholesale lots it is better purchased from this Company, who can supply it much cheaper in large quantities than it can be purchased at local hardware stores.

Experiments to Control Late Blight of Celery. Spraying experiments to control late blight of celery have been conducted in co-operation with the Horticultural Department for five years. The first year both lime-sulphur and Bordeaux mixture were tested, but as the results of the first year's work indicated that lime-sulphur was not as effective as Bordeaux mixture in the control of blight, it was not used the two following years. The next year, however, the high cost of copper sulphate, due to the war, made it very important to find some substitute for Bordeaux mixture in the control of late blight of celery. A comparative test was, therefore, made of lime-sulphur, sulfocide and Bordeaux mixture for the control of celery blight. On account of the extremely dry summer last year (1916) very little blight developed. Both Bordeaux mixture and sulfocide appeared to control the disease last year, but even in the comparatively dry season some blight developed on the rows sprayed with lime-sulphur. This year only Bordeaux mixture and sulfocide were tried. The Bordeaux mixture again proved satisfactory in holding the blight in check, but the sulfocide did not. So bad did the blight become on the rows thoroughly sprayed with sulfocide that it became necessary to spray them

with Bordeaux mixture in order to prevent the blight totally destroying the celery crop. The results show that sulfocide cannot be recommended for the prevention of late blight of celery. The results of five years' experiments proved conclusively that loss from late blight of celery can be prevented by spraying with Bordeaux mixture 4.4.40 formula, starting when the plants are in the seed bed and spraying at intervals of ten days or two weeks throughout the growing season. The results of all the experiments emphasize the importance of starting to spray when the plants are in the seed bed.

Experiments in Sprinkling Seed Oats with Formalin for the Prevention of smut. It has been proved by many years of experiments that immersing the seed in a strength of one pint of formalin to forty-two gallons of water for twenty minutes will prevent oat smut. Unfortunately, this very effective method is somewhat cumbersome, laborious and time-consuming. Consequently, some farmers have not adopted it and have used the more easily applied sprinkling method. This saves time and labor, and if it can be employed as effectively in the prevention of oat smut as the immersion treatment it will be more readily adopted by the busy farmer and thus lead to the more general treatment of seed oats throughout the Province for the prevention of smut. Experiments to test the effectiveness of the sprinkling method have been carried on by this Department for two years. The results of these experiments indicate that the sprinkling method can be successfully employed to prevent oat smut. They have been confirmed by the results obtained by numerous correspondents who, in the last three years, used the sprinkling method for the prevention of oat smut. This Department does not hesitate to recommend this method and feels confident that if the directions for it are carried out in detail and the necessary precautions taken to insure success those who try it will be satisfied with the results.

Directions for Sprinkling with Formalin.

Materials needed: Formalin (forty per cent. formaldehyde), a barrel, water, shovels for mixing the grain, an ordinary garden sprinkling can.

Mix one pint of formalin with thirty gallons of water. Place the grain to be treated in a heap on a clean canvas or floor. Sprinkle the formalin solution over the grain, then shovel the grain over into another pile so as to mix it thoroughly, then sprinkle and shovel again. Repeat this until every grain is moistened by the solution; then cover the pile with sacking and leave for three or four hours. At the end of this time spread the grain out thinly to dry; shovelling it over three or four times will hasten the drying. Thirty gallons of the formalin solution is sufficient to sprinkle about thirty bushels of grain.

Precautions to be Taken to Insure Success in Treating Seed with Formalin.

1. Great care must be taken to see that treated seed is not reinfected with smut spores. Sacks, bins, implements, etc., used in handling smutted grain must also be disinfected. The sacks should be boiled or dipped in a strong solution of formalin (one pint to ten gallons) and the seed drill should be cleaned and disinfected with formalin. The floor on which the grain is spread out to dry should first be scrubbed with a strong solution of formalin.

2. Sprinkle the formalin solution on the grain slowly as it is shovelled from pile to pile so that it will nearly all be absorbed and not make the grain too wet and sloppy.

3. Sow the seed as soon after treatment as possible. If the damp grain is placed in bags, in the drill or in any closed place for a few hours there is danger of the vitality of the seed becoming weakened.

4. On no account allow treated grain to sprout or mould or to be frozen when swollen after treatment.

Experiments in Spraying to Destroy Dandelions. During the past seven years experiments have been made in spraying with a solution of iron sulphate to destroy dandelions in lawns. The results obtained have been uniformly satisfactory. We cannot, however, recommend this method unreservedly, because, while we have been able to obtain good results with it here at the College, many of our correspondents who have tried it have not been able to do the same.

Experiments on the Cause and Means of Control of a Peculiar Disease of Winter Tomatoes. This work has been carried on now for three years and is still in progress. This year the results of our experiments give some promise that the disease can be held in check by the application of certain fertilizers such as acid phosphate and bone flour. This work is being continued in the hope of finding a satisfactory method of preventing this most serious trouble of winter tomatoes.

Investigations to Determine to What Extent the Fungus Which Causes Late Blight of Celery is Carried Over the Winter in the Seed. The fungus which causes this disease is said to be carried over the winter and spread through the agency of infected seed. In our two years' experiments to determine this point, over three thousand seedlings have been grown from infected seed on disease-free soil. Not a single plant has developed late blight, indicating at least that infected seed is not a very important source of primary infection.

Control of Snapdragon Rust. In the summer of 1916 the snapdragon rust (*Puccinia antirrhini,* Diet. and Holw.) first made its appearance in Ontario. This is a virulent disease of this popular flower, and when once established may destroy entire beds and borders of the plants and in greenhouses may do immense damage.

The first symptom of the disease is the formation of yellowish spots on the leaves and stems of the plants. In a few days the spots break through the under surface of the leaves and then expose brown, powdery masses. The stems become covered with long lines and patches of brown powder. In a short time the diseased plants become dry and brittle and die.

Experiments have shown that for the disease to spread the plants must be damp for at least six hours. In the greenhouse the disease may be held in check by watering from below so as to keep the foliage of the plants dry. Sulphur has a very decided tendency to check germination of the fungus spores. Dusting the plants with sulphur or spraying with lime-sulphur if thoroughly done every ten days will hold the disease in check.

So far there have been no indications that the disease is carried over on the seed. As far as our history of the disease in this Province is concerned, it seems to have been imported on diseased stock shipped in from the United States by a nearby florist and hence brought on potted plants to this locality.

From knowledge so far gained the following recommendations may be made for holding the disease in check:

1. Destroy all diseased plants should any appear.
2. In greenhouses water the plants only from below.

3. Dust the plants thoroughly every ten days with fine powdered sulphur or spray thoroughly with lime-sulphur made up of one part commercial lime-sulphur to thirty-five parts water.

4. Grow plants from seed.

5. Do not import potted plants or cuttings from any source.

Inspection of White Pine Blister Rust. Inspection work for this disease in Ontario is in charge of Mr. E. J. Zavitz, Provincial Forester. At his request this Department made the necessary inspection of white pines and currants in this immediate neighborhood. Six infected pine trees showing in all forty infections were located and destroyed. No rust was found, however, on either cultivated or wild species of Ribes.

Food Value of Mushrooms.

During the past season many inquiries have been received concerning the food value of mushrooms. This has no doubt been due to a greater or less abundance of the plants in certain portions of the Province, and also to the campaign for the conservation of food products.

In the past mushrooms have been considered as very nutritious. Sometimes they have been called "Vegetable Beefsteak," and have been said to have a food value of twice that of fresh vegetables. This high opinion of their food value may be due partly to their delicious flavor, making one eat large quantities. A chemical analysis shows that mushrooms are comparatively rich in nitrogen and this was taken to indicate that they were rich in proteids. However, more careful analysis shows that much of the nitrogen is in such combination as to make it unavailable for human nutrition.

Careful analysis of the available food material in mushrooms shows that the cultivated mushroom has about the same food value as cabbage, but as bought on the market costs at least twenty-five times as much and is only about one-tenth as nutritious as lean beef. Some of our wild mushrooms are still lower in food value. The ink caps are less than a fourth as nutritious as the cultivated mushroom, and about a fortieth as nutritious as beef. The Morel is about half as valuable as cabbage and one-twentieth as valuable as lean beef.

From the standpoint of foods the mushrooms, as a class, may be classified as very low in actual food value, but they are excellent as a relish, and their utilization from this standpoint should not be ignored and is worthy of much consideration.

Publications.

During the past year two bulletins have been prepared, which are now ready for publication, namely, "The More Important Fruit Tree Diseases of Ontario," written in collaboration with Professor Caesar, and "The more Important Fungus and Bacterial Diseases of Vegetables in Ontario," written in collaboration with Professor Jones. In addition several articles on weeds and fungus diseases have been contributed to the various agricultural papers.

DAIRYING.

Loss in Weight of Print Butter.

A number of farm buttermakers suffer loss of their butter by seizure on the market, because of short weight when offered for sale. In order to find what weight of butter should be put in prints of butter kept under varying condition, tests were made of prints kept in an ice cold storage at a temperature of 35 degrees to 37 degrees F. in the cold storage and 48 degrees to 55.6 degrees F. in the cellar. The relative humidity of the air in these places was from 88 to 92 per cent. of saturation.

The prints of butter were wrapped in dry and wet cheesecloth, dry and wet parchment paper and one lot in each place had no paper or other wrapper on the prints of butter. The prints were weighed at the end of one, three, seven, ten and fourteen days on a scale which weighed to one-thirty-second of an ounce.

The results were that butter held for two weeks in a cold storage would require to weigh, when fresh and wrapped in wet parchment paper, from 16⅛ to 16¼ ounces; and print butter under similar conditions kept in a cellar would need to weigh from 16⅜ to 16½ ounces when made, in order that the customer should receive sixteen ounces of butter when the package is purchased. Farm buttermakers should not be expected to give butter away in the form of extra weight for one pound; on the other hand a person buying butter is entitled to full sixteen ounces of butter, without the wrapper.

Prints of butter containing no salt and up to as much as 7.2 per cent. of salt were tested as to relative losses in weight in cold storage and cellar, at from three to fourteen days. The losses were 3/32 to 14/32 of an ounce, with no salt, and 7.2 per cent. salt, respectively in cold storage, while in the cellar the losses were 6/32 to 27/32 of an ounce for similar lots. In all tests the lots containing more salt suffered a greater loss of weight when kept from three to fourteen days.

There is also considerable difference in the actual weight of a print of butter according to the texture of the butter and method of filling the printer. As a result of tests there was a variation of from 3/32 to 1 10/32 of an ounce less butter by loose printing as compared with firm packing of the butter in the printer. Two persons filling printers from the same lot of butter may get variations in weight from ⅛ to ¼ of an ounce per print of butter.

The only safe plan is to weigh each print of butter and allow from an ⅛ to ½ an ounce extra, according to the length of time the butter is kept and the conditions of storage.

Effect of Volume of Flushing Material on Percentage of Fat in the Cream When Separating Varying Weights of Milk.

On the farm, either warm water or skimmilk is used for flushing the separator bowl to remove the cream from the inside of the bowl after the milk has all been run through. Usually, about the same volume of flushing material is used each time, regardless of the quantity of milk separated, and most of the flushing material, along with the cream, is allowed to go into the cream vessel. It is claimed by those responsible for testing cream that this practice accounts for the usual decrease in the test of cream in the fall of the year when we might expect the test to increase.

Four different makes of hand cream separators were used in the tests and the results when averaged showed that after separating 100 lbs. milk, and flushing the bowls with one quart of warm water, the cream averaged 42 per cent. fat; with the

same machines and similar milks, and using one quart of warm water to flush the bowls after running 50 lbs. of milk through the separator, the average test of the cream was 41.12 per cent.—a decrease of nearly one per cent. fat.

When one quart of skimmilk was used under similar conditions to the foregoing, the average percentage of fat in the cream, after separating 100 lbs. milk, was 42.37, and the cream, after separating 50 lbs. milk and flushing with one quart of skimmilk, tested an average of 41.9 per cent. fat—a decrease of a little less than one-half of one per cent.

It would appear from these tests that where the same volume of flushing material is used on runs of varying weights of milk, there may be quite a marked effect on the percentage of fat in the cream. No more warm water or skimmilk should be used than is needed to flush the bowl and as soon as all the cream is removed from the bowl the cream vessel should be removed, or the cream spout turned, so that the surplus may run into the skimmilk. Best results are got by allowing the speed of the bowl to decrease during the flushing process.

Weight of Butter Necessary to Place in Boxes Kept in Cold Storage One to Three Months.

The standard box for Canadian butter solids is supposed to hold fifty-six pounds of butter, net weight. Where butter is held for some time in cold storage before selling, it is necessary to give extra weight in order to have the butter weigh fifty-six pounds when sold. Owing to the increased price of butter during the past three years, manufacturers are inclined to give no more extra weight in either prints or boxes than is needed to insure full weight to the purchaser. The customary plan, in the case of solids, is to pack about fifty-seven pounds of butter in a parchment lined box, and when this is sold to expect pay for fifty-six pounds. Tests made on boxes of butter held from June to September, made from raw and pasteurized cream, showed a loss of but one-quarter of a pound per box of fifty-seven pounds, pasteurized cream butter, during two months in cold storage, and but one-half pound in three months. This butter was salted at the rate of three per cent. and the finished butter contained 1.45 per cent. of salt.

Raw butter, salted at the rate of six per cent., and containing 2.78 per cent. salt in the butter when packed, lost one-half pound per box during the first two months and three-quarters of a pound at the end of three months.

Prints of these butters weighed at the end of three, seven, ten, and fourteen days showed a less rapid and lessened total shrinkage on the pasteurized, lightly-salted lots as compared with the lots made from raw cream and salted rather heavily, or at the rate of six per cent. The lightly salted prints were slightly over weight at the end of two weeks, while the more heavily salted prints were under sixteen ounces in weight in the same time. Prints of each, weighed four-thirty-seconds of an ounce over sixteen ounces when made, or at the beginning of the test.

These results indicate that in the case of pasteurized cream butter, lightly salted, that one-half pound extra per box would be sufficient to allow for shrinkage while held in cold storage for one to three months; but in the case of raw cream butter salted at the rate of five to six per cent., from three-quarters to one pound of butter extra per box would be needed in order that the net weight of butter may be fifty-six pounds when sold, after holding in storage for one to three months.

Commercial vs. Home-made Rennet.

In the spring of the year we purchased a number of calves' stomachs from an abattoir company for the purpose of testing home-made rennet. We found these to vary a great deal in strength, some being very weak, due, we think, to washing the inside of the stomach before shipping. We ordered a second lot and asked that the insides be not washed. These proved to be much better. The general plan of making the home-made rennet was to soak one stomach in half a gallon of salt water for about six days then use this solution at the rate of half a gallon per 1,000 lbs. milk. Five drams of acetic acid were added to each lot as a preservative. This rennet kept in good condition for six weeks.

The commercial rennet produced an average of 1.04 lbs. more cheese per 1,000 lbs. milk and the cheese were slightly better, averaging nearly one point higher in the score as compared with the home-made rennet lots. While it is possible to make very good rennet on the farm or at the factory by soaking calves' stomachs in brine for several days, where possible, we should advise the use of commercial rennet for cheese manufacture, or, failing this, use pepsin or a mixture of rennet and pepsin.

The addition of hydrochloric, or acetic acid at the rate of one dram of acid per 100 lbs. milk, to the milk, along with the home-made rennet did not prevent a lessened yield of cheese by the use of weaker home-made rennet. The difference in favor of the commercial rennet lots was from one pound to one-and-one-half pounds cheese per 1,000 lbs. milk. The average score of the cheese was nearly one point higher for the commercial rennet lots.

Rennet vs. Pepsin and Mixtures of Rennet and Pepsin.

A number of tests were made comparing rennet with pepsin and mixtures of rennet and pepsin as coagulating agents. The average percentage of fat in the milks for the lots where rennet alone was used was 3.1, and the average percentage of casein for these lots was 2.06.

The pepsin groups averaged 3.18 per cent. fat and 2.06 per cent. casein. The groups where mixed rennet and pepsin were added averaged 3.16 per cent. fat and 2.10 per cent. casein.

The main results are indicated in the following table:

Coagulant	Lbs. Cheese per 1,000 lbs. Milk	Average score of Cheese (Max. 100)
Rennet	88.6	92
Pepsin	86.8	91.6
Rennet and Pepsin	87.9	91.8

The foregoing figures show the results of using rennet, pepsin, and a mixture of these in a forcible manner. The rennet produced more cheese and cheese of a little better quality than did pepsin, while a mixture of the two gave results better than did pepsin alone, but not so good as the rennet.

Effect of Increasing Acidity of Milk at Time of Adding Rennet or Pepsin.

By increasing the acidity of the milk from .17 to .19 per cent. at the time of adding the rennet, the yield of cheese per 1,000 lbs. milk was increased from

91.95 lbs. to 93.1 lbs. The percentages of moisture in the two lots of cheese were practically the same, but the higher acid lot scored half a point less, indicating that while the increase in acidity at the time of renneting produced more cheese, the quality of the cheese was not quite so good by this plan.

A similar test with pepsin as the coagulating material increased the yield of cheese from 91.66 lbs. per 1,000 lbs. milk, to 93.62 lbs., and the quality of the cheese was improved—the score was one point higher. Further tests are needed on this point.

Effect of Increasing the Temperature of the Milk at the Time of Adding Pepsin.

It has been claimed that though the pepsin solutions are usually weaker than those made from rennet, if the temperature of the milk at the time of adding the pepsin be increased from 86 degrees F., the standard temperature in Cheddar cheese manufacture, to 90 degrees F., the time required for coagulation would be about the same as for rennet, using the same or slightly increased quantity of pepsin. The results of several tests on milks averaging 3.17 per cent. fat and 2 per cent. casein, were as follows:

—	3 oz. Rennet per 1,000 lbs. milk at 86° F.	4 oz. Pepsin solution per 1,000 lbs. milk at 90° F.
Average % fat in whey	.229	.218
Lbs. cheese per 1,000 lbs. milk	87.75	88.08
Average score of cheese	92.36	91.80

The results show a slightly decreased loss of fat in the whey by using pepsin in milk at 90 degrees F.; there was also a slightly increased yield of cheese, but the quality of the pepsin cheese was slightly poorer as compared with the rennet lots. When three ounces of commercial pepsin solution per 1,000 lbs. milk was used at 90 degrees F., there was more cheese produced (1.7 lbs. per 1,000 lbs. milk) but the cheese was poorer in quality by one-and-a-half points. Similar results were got by using two and one-half ounces of rennet at 90 degrees F., as compared with three ounces added to milk at a temperature of 86 degrees F.

These tests indicate that it might be advisable to increase the setting temperature of the milk from two to four degrees where pepsin solutions are weak, or when for any cause, coagulation of the vat of milk is slow—over one-half hour in getting firm enough to cut, after the coagulating material has been added to the milk whether using rennet or pepsin.

ANIMAL HUSBANDRY.

Baby Beef Experiment.

In December, 1915, a series of experiments to discover the economy of baby beef production was commenced. This work is to extend over a period of five years, the first of which was completed in the spring of 1917, on the sale of the first crop of calves. Five good grade Shorthorn cows carrying calves to bulls of varying qualities were purchased in December, 1915. These cows calved at varying

dates from December 1st to February 19th, 1916. Three of the calves were allowed to nurse their dams, the other two were raised on the pail. Accurate account of the feed consumed, labor, interest and costs of stabling, also value of milk and manure produced, were kept on both cows and calves. To make conditions as nearly as possible like those on average farms, the cows were not highly fed, their rations consisting largely of hay, silage and some roots with very little grain except right after calving.

To arrive at the true cost of producing these baby beeves, in each case the costs of the dams were computed up until the day on which they dropped their next calves. Also, one cow failed to breed again and the loss of $21.81 occasioned by selling her to the butcher was charged against the calves. No allowance for depreciation of the remaining cows was made this year, on account of the rise in value of all cattle during the year, which offset any depreciation. The following table gives the detail of the experiment:

Name of Cow	Prettie	Barber	*MacCannell	*Hales	*White	Totals
Date Calved	Feb. 19, 1916	Dec. 15, 1915	Feb. 5, 1916	Nov. 29, 1915	Dec. 31, 1915	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Cost of cow	87 31	120 86	95 70	84 16	106 81	494 84
Interest	6 81	6 04	5 54	4 56	8 01	30 96
Feed of cows	59 29	37 67	47 26	41 49	58 41	244 12
Stabling cow and calf	6 75	5 25	6 25	5 75	7 00	31 00
Feed of calf	58 21	63 99	39 68	38 26	35 87	236 01
Total cost	131 06	112 95	98 73	90 06	109 29	542 09
Manure of cow and calf	26 50	19 25	22 40	20 50	25 75	114 40
Milk produced	86 90	45 44	.....	4 50	.....	136 84
Net cost of calf	17 66	48 26	76 33	65 06	83 54	290 85
Weight of calf when sold	760 lbs.	910 lbs.	910 lbs.	790 lbs.	710 lbs.	4,080 lbs.
Price received	$76 00	$91 00	$91 00	$79 00	$71 00	$408 00
Profit on calf	58 34	42 74	14 67	13 94	—12 54	117 15

NOTE.—All calves were sold March 17th, 1917.

Cows marked thus (*) nursed their calves.

NOTE.—The White cow failed to breed again and the extra cost of her feed until she was sold contributed somewhat to the poor showing of her calf. This condition frequently arises in all herds, so is not at all an unusual extra expense.

Summary.

Sale price of calves		$408 00
Total cost cows and calves for year	$542 09	
Loss on sale of White cow	21 81	
	$563 90	
Credits for milk and manure	251 24	
Net cost of calves		312 66
Surplus to pay labor on cows and calves		$95 34

The actual cost of the labor on these cows and calves was slightly over $200, so that the experiment did not show an actual profit but the calves were only of ordinary quality and breeding. The figures are interesting, however, and so far tend to show that there are some possibilities in this line of production of profit in beef raising.

The succeeding crop of calves are all from an extra good Shorthorn bull and their feeding and fleshing qualities are much superior to those here mentioned, indicating a better financial showing.

Supplemental Feeds for Young Pigs.

Object of Experiments. Work done along this line in former years is in need of further confirmation. Skim milk is recognized as one of the very best supplemental feeds for young pigs, but is becoming decidedly difficult to obtain in many parts of the Province where, owing to labor conditions, beef cattle are replacing the dairy breeds, and where powdered milk factories and condenseries are taking the place of creameries. The primary object of the tests was to compare tankage with skim milk as a supplemental feed for young pigs.

Plan of Experiment. Two experiments were conducted, one being a duplicate of the other. Young pigs were divided into four groups to be given different rations as follows:

Group (1) meal and water only.

Group (2) meal and skim milk fed in slop.

Group (3) meal and tankage: the tankage constituted 10 per cent. of the meal ration.

Group (4) Meal and one-half the quantity of skim milk fed group (2) and one-half the quantity of tankage fed group (3).

The following table is a summary of the results obtained, group (1) being considered the check group.

—	Group (1)	Group (2)	Group (3)	Group (4)
	Meal and water only	Meal and skim-milk fed in slop	Meal and tankage	Meal and skim-milk and tankage
Average daily gain.....	.846 lbs.	.89 lbs.	.867 lbs.	1.11 lbs.
Feed cost of one pound of gain	6.58c	9.15c.	7.86c.	7.54c.

Conclusions. Tankage for growing pigs makes a very satisfactory substitute for skim milk.

Tankage gives better results with young pigs when fed in conjunction with skim milk.

It is doubtful if tankage should constitute more than 10 per cent. of the meal ration.

It must be borne in mind that these conclusions are reached after only a comparatively small number of experiments, and that further work is necessary to verify the results.

Farm Business Surveys.

As intimated in last year's report, this Department has engaged in a scheme of farm cost accounting to determine the factors in the organization of actual farm businesses that make for success or failure in farm practice. During the past year the Department has made an investigation into the methods of conducting these surveys as practised in the United States. Actual work out on farms in Pennsylvania and in the headquarters office at Washington, D.C., was done by

members of the staff, and from the experience there gained a definite plan of procedure for such work on Ontario farms was mapped out. Actual work in this Province was commenced on October 1st in Caledon Township, Peel County. At the time of writing complete reports of the year's business of over 100 farms in that area have been already obtained and in the course of a month or two definite information derived from the analysis of these returns will be presented to the public. Plans are also under way to conduct a similar survey in the early spring on five hundred farms in one of the recognized dairy districts in Western Ontario.

The Department has for the past two years been working on the subject of simple farm book-keeping for the average farmer. Experience has shown that the ordinary systems of double entry book-keeping are not suited to the needs of the average farmer who has not had the advantages of commercial education or practice, and who has not the inclination to spend the time in the evenings, after a hard day's work in the open, in posting up and following through the entries necessary to keep a double entry system in balance. Nor has he the training necessary to properly close such a set of books at the end of his business year so as to give him a proper knowledge of the results of his year's work. With the idea of eliminating the complicated features of double entry book-keeping and at the same time retaining the features of accounting necessary for a proper analysis of a business, this Department has evolved the set of forms, directions, and samples of which are herein given.

The outstanding feature of this system is the Ledger-Journal on which all transactions, whether cash or credit, are entered only once, and in the one place, and on which the summary of the year's business is calculated.

Directions.

Inventory includes Cash in Hand or Bank.

1. Take Inventory at first of year, valuing each head of stock and implement at its present market value.
2. Post total of Inventory in upper left (Expense) corner of Ledger-Journal.
3. Enter every transaction in Ledger-Journal as soon as it occurs, at full values, whether cash is paid or not.
    (*a*) All purchases are entered in proper column on left, or Expense, side of page.
    (*b*) All revenue is entered in proper column on right, or Income, side of page.
4. When an article is purchased and cash is not paid, put whole amount in its proper column on left side of Ledger-Journal sheet, and put the details in Accounts and Bills Payable sheet. If the account is paid during the year, mark paid, but do not enter again, as you have already charged it to farm in Ledger-Journal.
5. If any accounts, notes, or bills that were owing at the beginning of the year are paid during the year, credit should be taken on the right-hand side when the books are being closed at the end of the year. This is necessary in order that it may not affect the business of this year alone.
6. In closing books at end of year—
    (1) Total all columns and put totals in totals columns on each side of page.
    (2) To left-hand column add:
        (*a*) Value of labor of farmer's family;
        (*b*) Interest on average Inventory for year. (Average Inventory is average between the Inventory at beginning of year and that at end of year.)
    (3) To right-hand column add:
        (*a*) Total of Inventory at end of year;
        (*b*) Amount paid through year on bills that were owing at beginning of the year.
7. Labor income is difference between the right and left side columns.
8. Net worth is found by subtracting Bills and Accounts Payable from Inventory.

EXPENSE							LEDGER-JOURNAL	INCOME					
Inventory and Totals	Repairs and Sundries	Live Stock and Improve	Household	Feed and Seed	Labor	1915	Transaction	Crops	Live Stock	Milk, Butter and Eggs	Garden Orchard	Sundries	Inventory and Totals
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.			$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,500 00	.....	.....	.....	.....	.....	Jan. 1	Inventory of everything owned	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 16	Cheque from creamery, 220 lbs. fat at 30c	.....	.....	66 00	.....	.....	.....
.....	.....	.....	10 15	.....	.....	" 17	Groceries, $2.50; Meat, $1.40; Clothing, $6.25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	26 00	.....	" 26	1 ton Bran for cows	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 27	Sold old mower, $5.00; Junk, 90c	.....	.....	.....	.....	5 90	.....
.....	.....	.....	.....	.....	32 00	" 31	J. Jones, wages for month	.....	.....	.....	.....	.....	.....
6 25	.....	.....	.....	.....	.....	Feb. 1	Paid interest on G. Smith's note	.....	.....	.....	.....	.....	.....
.....	.....	.....	1 20	.....	.....	" 3	Traded at store, 4 doz. eggs at 30c. for groceries	.....	.....	1 20	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 6	Sold J. Brown 100 bushels barley at 95c	95 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 7	Sold butcher 2 dry cows at $48.00 each	.....	96 00	.....	.....	.....	.....
.....	2 45	.....	.....	.....	.....	" 10	Repairs to wagons, $1.20; Harness, $1.25	.....	.....	.....	.....	.....	.....
.....	.....	270 00	.....	.....	.....	Oct. 10	Bought 6 steers to feed, at $45.00 each	.....	.....	.....	.....	.....	.....
.....	42 00	.....	.....	.....	.....	" 21	Paid threshers' bill	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 31	Sold 6 pigs, 1,250 lbs., at $9.00	.....	112 50	.....	.....	.....	.....
50 00	.....	.....	.....	.....	.....	June 1	Paid interest on Mortgage	.....	.....	.....	.....	.....	.....
62 00	*62 00	———									———	*50 00	50 00
344 00	.....	*344 00	———							———	*100 00	.....	100 00
280 00	.....	.....	*280 00	———					———	*590 00	.....	.....	590 00
98 00	.....	.....	.....	*98 00	———			———	*840 00	.....	.....	.....	840 00
380 00	.....	.....	.....	.....	*380 00			*200 00	.....	.....	.....	.....	200 00
120 00	.....	.....	.....	.....	120 00	Dec. 31	Value of unpaid family labor	.....	.....	.....	.....	.....	.....
473 75	.....	.....	.....	.....	.....	" 31	Interest on average inventory, less interest paid in cash—$10,600.00 at 5%, $530.00, less $56.25 =$473.75	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	" 31	Bills paid, that were owing at beginning of year	.....	.....	.....	.....	.....	125 00
.....	.....	.....	.....	.....	.....	.....	Inventory at end of year	.....	.....	.....	.....	.....	10,700 00
341 00	Labor	Income	of Owner										
12,605 00													12,605 00

*Supposed totals of columns at end of year.

ACCOUNTS AND BILLS PAYABLE, 19

INCLUDING MORTGAGES, NOTES AND UNPAID ACCOUNTS.

Date Given	Time	Date Due	In Favor of	Address	Amount	Rate Interest	Given for	Date Paid

Annual Live Stock Sale.

The annual auction sale of surplus live stock, held on November 1st, was exceptionally satisfactory. Some very good prices were realized, among them $1,100.00 for the yearling Shorthorn heifer—Augusta Snowdrop=122108=, $600.00 for the three-year Shorthorn cow, Roan Lady 4th=110289=, and $525.00 for the Milking Shorthorn cow Puddington Solo=104586=, and $475.00 for the 7-months Milking Shorthorn heifer Calf O.A.C. Waterloo Baroness 3rd.

The different classes of live stock sold as follows:

6	Shorthorn bull calves averaged	322 50
3	Shorthorn females averaged	688 70
3	Dairy Shorthorn bull calves averaged	140 00
2	Dairy Shorthorn females averaged	500 00
8	Holstein females (4 cows and 4 calves) averaged	169 60
3	Holstein bull calves averaged	143 30
2	Ayrshire heifers averaged	152 50
4	Ayrshire bull calves averaged	55 60
3	Jersey bull calves averaged	77 00
2	Yearling steers averaged	244 05
19	Twelve-months' Yorkshire sows averaged.....(bred)	73 95
10	Six-months Yorkshire sows averaged .....(not bred)	37 50

The total receipts from the sale were $10,251.00.

The Dairy Herd.

During the current year thirty cows in the dairy herd finished a lactation period. The records thereof appear in the following table. The outstanding feature of the year's work is the great record of the four-year-old Holstein heifer, Molly Rue Rattler. This is the largest Canadian record for a four-year-old Holstein cow. It is worthy of note that this heifer and her dams for four generations were bred at the College, and that this record was made on twice-a-day milking for nine months of the year. It is also noteworthy that the Holstein cow Young Springwood has followed her 1916 record of 20,110 lbs. milk and 820 lbs. of fat, with a 1917 record of 17,400 lbs. milk and 715 lbs. fat, both records entirely on twice-a-day milking. Although during the winter of 1916-17, the dairy herd had a very small supply of silage and no roots; the Ayrshire and Jersey cows show a marked increase over 1916, while the Holstein and Shorthorn cows maintain the high average production of that year.

Name of Cow	Years of age	Breed	Days in milk	Lbs. milk	Lbs. fat	Value of fat	Value of skim-milk	Total cost feed	Profit over feed cost	Value of milk at $1.60 per cwt.	Profit over feed cost
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Molly Rue Rattler	4	Holstein	365	21,061	832	323 38	40 25	129 90	233 73	339 96	207 06
Young Springwood	6	"	356	17,401	715	269 18	33 37	113 64	188 01	278 41	164 77
Margaret Cornucopia	11	"	365	13,606	495	171 12	26 21	121 63	75 80	217 70	96 17
Waterloo Baroness	5	Shorthorn	365	13,352	484	168 12	25 74	108 64	85 22	213 63	104 99
O.A.C. Minnie	8	Ayrshire	365	12,602	477	164 76	24 25	108 59	80 32	201 63	93 04
Toitilla Rue 2nd	5	Holstein	324	13,386	472	173 57	25 82	87 27	112 12	214 16	126 89
Toward Point Ann 3rd	5	Ayrshire	365	11,673	458	161 30	22 63	80 62	103 31	186 77	106 15
Torrs Daisy Bell 3rd	5	"	365	10,828	438	153 30	20 76	76 01	98 04	173 23	97 22
Mercena Netherland O.A.C. 2nd	6	Holstein	365	12,278	423	151 62	23 70	90 24	85 08	196 44	105 20
Mercena Netherland O.A.C. 3rd	4	"	310	11,044	404	135 61	21 28	71 13	85 78	176 69	105 56
O.A.C. Glennie 3rd	7	Ayrshire	308	9,385	395	129 78	18 00	96 20	51 58	150 16	53 96
Bud's Minnie 2nd	3	"	361	9,833	389	136 49	18 88	80 98	74 39	157 33	76 35
Brampton Dulcie	6	Jersey	362	7,913	382	131 26	15 05	79 42	66 90	125 61	46 19
Molly Rue Rattler 2nd	2	Holstein	365	9,143	370	129 89	17 54	75 44	71 99	146 20	70 83
Margaret Cornucopia 4th	2	"	365	9,270	354	123 91	17 81	66 08	74 74	148 32	82 24
Puddington Solo	5	Shorthorn	357	8,841	354	140 70	16 97	84 93	72 74	141 44	56 51
Beauty of O.A.C. 3rd	6	Holstein	332	10,706	352	136 15	20 70	86 87	69 98	171 28	84 41
Floss 5th of Glenhurst	12	Ayrshire	297	7,567	348	140 90	14 44	86 96	68 38	121 07	34 11
Queenie's Merger	3	Jersey	365	6,397	342	123 14	12 10	63 02	72 22	102 36	39 34
Brampton Crown Princess	6	"	365	7,097	333	119 93	14 33	66 96	67 30	113 56	46 60
Bargower White Soncie	5	Ayrshire	364	7,709	330	114 27	14 76	74 21	54 82	123 33	49 12
Golden Rose	9	Shorthorn	365	7,633	318	109 44	14 63	75 50	28 57	122 14	26 14
Sidbrook's Pride	9	Jersey	297	6,632	295	99 85	12 67	53 33	59 19	106 11	52 78
Brampton Tapon	6	"	230	5,227	258	99 42	9 94	51 32	58 04	83 64	32 32
Flora Hope 2nd	2	Shorthorns	361	6,669	255	98 64	12 83	77 05	34 42	106 70	29 65
Daisy Posch Johanna	10	Holstein	338	7,759	252	87 21	15 01	59 37	42 85	124 14	64 77
Reverencia's Princess	2	Jersey	334	4,321	229	91 35	8 19	60 25	39 29	69 14	8 89
Floss Guarantee 2nd	3	Ayrshire	332	5,611	216	73 60	10 80	45 55	38 85	89 78	44 23
Flora Hope	4	Shorthorn	327	5,240	184	63 60	10 11	87 89	-14 18	83 83	-4 09
Welbeck Princess Darlington	5	"	213	3,109	113	40 33	5 99	36 52	19 89	49 75	13 23

HORTICULTURE.

Apple Crop Failure.

The following varieties of apples in the College orchard produced medium to full crops this year: Snow, McIntosh, Wealthy, Duchess, Spy, Gravenstein, Greening, Yellow Transparent, Colvert and Salome. This fact is interesting in view of the almost total failure elsewhere in the Province. The cause of the failure is not obvious, such evidence as I have been able to gather on the matter being unsatisfactory and conflicting. West of Toronto, apple bloom was very light, and in many cases absent altogether. This condition seems to have been caused by the exceedingly wet June of 1916, which was most unfavorable to fruit-bud formation. It is a well known fact that apple trees begin early in June to develop their blossom buds for the following year.

I have reports of mature apple trees having been killed outright by wet conditions in the month mentioned. In the Niagara district large numbers of peach and other trees died outright in July, after having made normal, healthy growth up to that time. Trees on well drained land suffered least, and it is probably correct to say that under the conditions which obtained in the summer of 1916 a great many orchards throughout Ontario were damaged more or less severely by lack of drainage.

The varieties listed above as having fruited in the College orchard this year are mostly the hardier varieties, which were able to develop fruit-buds in the short season which remained to them after the rainy period last summer. Aside from the hardy varieties the only other trees which fruited with us are those that had no crop last year, and which were, therefore, in a better condition to withstand the extreme wet.

This matter of the failure of the apple crop is one of great importance, as many of our best fruit growers are quite nonplussed and unable to decide wherein their practice has been incorrect. Thorough drainage has always been a precept of the fruit grower, but it would appear that the subject deserves even greater emphasis than it has received in the past. The only orchards in the Province which produced fruit in any appreciable quantities are east of Toronto, along the north shore of Lake Ontario. This section received less rain in May and June of 1916, conditions consequently being more favorable to fruit-bud formation.

Plant Breeding.

Strawberries. The first stage of the strawberry breeding work started in 1912, is about concluded. We fruited in 1915 and 1916 over 7,000 seedling strawberries, most of which are the result of cross-pollenations made by hand. This block of plants occupied some two and a half acres of ground and constitutes in number of plants and in area devoted to the work the most extensive strawberry breeding work ever undertaken in Canada. In 1915, we selected some 300 promising seedlings, which were set out to form a new plantation, and which fruited this year. Out of the 300, we have marked this year four varieties which appear worthy of introduction. We shall have a very limited supply of plants of these new varieties for distribution in 1918, but by the following year hope to be in a position to send them out in larger quantity.

Apples and Pears. As a result of careful cross pollenizing done in 1913, we have now on hand approximately 1,000 seedling apple and pear trees, three and four years old. These are now ready to be transplanted into their per-

manent situations for fruiting. This lot of seedlings is of very great value, and we confidently expect to find among them new varieties of great merit.

Hardy Fruits for the North. We procured from Russia in 1915 a quantity of apple and pear seed from varieties said to be extremely hardy, and which it was thought might prove of great value for Northern Ontario. We have now on hand, grown from this seed, 1,200 apple and 100 pear, two years old. This stock will now be transferred to the new fruit-breeding station at the Industrial Farm, Fort William, this station having been established since we began this work. In order not to lose this stock, as might happen if it were all transferred to a climate as severe as that of Fort William, I am recommending to Mr. Leslie that an isolated location be secured in Muskoka or Parry Sound where a small number of these trees could be planted and where they would be certain to thrive. In this way we would, in case of necessity, still be able to obtain a supply of seed for trial at points farther north.

Besides the hardy stock actually imported from Russia we have several hundred pear seedlings of Russian varieties grown from seed produced by Mr. David Tait, at Iron Bridge, Algoma. These Russian pears are perfectly hardy in Algoma, and the seedlings we now have will be transferred to Mr. Leslie for testing.

Vegetables. We began the breeding of celery in a small way in 1913, and the systematic breeding of cabbage, carrots, beets and onions in the spring of 1914. When the war started, late in 1914, we realized that the European supply of garden seeds would probably be seriously curtailed. Having already made a beginning in seed growing, we decided at that time, in view of the war situation, to continue the work. We have, therefore, prosecuted this line of work continuously and with the greatest possible care since that date. We were guided largely in this matter by the advice of the Dominion Seed Commissioner, who foresaw that the vegetable seed growing industry would require to be actively taken up in Canada. Since that time the seed situation has steadily become worse until now the European supplies have almost ceased. We feel that this work of vegetable breeding and seed production is of great importance, and hope to be able to take it up on a larger scale next year. The seed we are producing is "stock seed," to be used, not for commercial crop production but for future seed growing. In other words, we are producing the seed from which future seed supplies will be reared. In this connection I beg to quote you herewith a letter on this subject from the Dominion Seed Commissioner, which will explain itself.

Ottawa, November 21st, 1917.

Mr. J. W. Crow,
Professor of Horticulture,
Ontario Agricultural College, Guelph, Ontario.

Dear Professor Crow.—This is to advise you that arrangements have now been completed whereby the Department of Agriculture of the University of British Columbia at Vancouver is to take full and direct charge of the production of field root and garden seed supplies within that province. Dean L. S. Klinck will receive requisitions for seed supplies from seed merchants throughout Canada together with stock seeds for their production, place contracts with reliable growers on behalf of the seed merchant, inspect the seed crop and the threshed and recleaned seed, and ensure its delivery in accordance with terms of the contract which will exist as between seed merchant and grower.

You are probably aware that supplies of practically all kinds of field root and garden seeds which formerly came from Europe are now almost completely cut off, due to war conditions. Unfortunately we have not any seedsmen in Canada who produce stock seeds in the sense that they are produced in Europe, and if the seed supplies for the next few years in Canada are to be of good quality, then the stock seed to produce

them will have to come largely from experiment stations. You have made better progress in the production of these stock seeds for garden crops than has been made elsewhere in Canada, and I desire again to impress upon you the great importance at this time of increasing your efforts in that direction, which should be maintained until the end of the war.

Very truly yours,

(Signed) Geo. H. Clark, *Seed Commissioner.*

Paris Golden Self-Blanching Celery.

The head at the left was grown from seed of O.A.C. strain No. 316, sent to Mr. Chase for testing, and is a fair sample. The head at the right was grown from Burpee's seed of the same variety and was the best head in the lot. This photo speaks well for the careful breeding which is behind our O.A.C. strains of seed.

In accordance with the plan outlined in Mr. Clark's letter, we expect to send the bulk of our celery and cabbage seed to be increased under the more favorable climatic conditions of British Columbia.

The value of this stock seed lies in its quality and in the great care which has been used in breeding it up to the present standard. We feel certain there is no stock seed in America of these varieties equal in quality and value to the seed we have produced. The methods followed in selection and isolation are altogether

too detailed to permit of the handling of large numbers of mother plants, with the "progeny" test of each individual upon which we rely to separate the good stocks from the poor ones.

Celery Breeding. We produced this year four pounds of seed of the Paris Golden Self-Blanching variety, which for market purposes would be worth not less than twenty-five dollars per pound. We sent out several small lots of this seed last spring to commercial growers for testing, and take pleasure in submitting herewith a photograph of two heads received from George A. Chase, Ayr, Ont., in which one of our O.A.C. strains is shown to compare most favorably with one of the best commercial strains on the market.

Cabbage. We have this year about three pounds of "stock seed" of the Glory of Enkhuizen variety. This seed is worth about six dollars per pound.

Beet. We have been working with the Detroit Dark Red variety and have this year about six pounds of stock seed, worth four dollars per pound. Some of this seed will be placed elsewhere for increase, but we shall retain the best of it to be increased here under our own personal supervision. This quantity of seed is sufficient, at a moderate estimate, to produce in two years' time 3,000 lbs. of seed.

Onion. Of the Southport Yellow Globe variety we have five pounds of seed worth ten dollars per pound. This quantity is sufficient to produce not less than 1,200 lbs. of seed in the next crop. We wish to keep the best of this under our own supervision also and shall therefore undertake its increase ourselves.

Carrot. We have on hand a large quantity of excellent roots of the Chantenay variety, produced from seed of a stock selected by us in 1914. We plan to carry over the choicest roots of this lot to be planted next spring for seed production, and hope to be able to handle an acre or more of carrots for seed purposes.

Landscape Gardening.

I have to report a greatly increased interest in Rural Landscape Gardening and a demand for planting plans for rural homes and rural school grounds, which it is entirely beyond our limited facilities to supply. At first thought one would not connect Landscape Gardening work with war time, but anyone who has moved about in Ontario must have observed that the home instinct is much more in evidence since the war than formerly. This is, perhaps, natural and easily understood when one calls to mind that to those who have crossed the seas in body or in anxious thought, home has taken on a vastly increased significance.

We feel, therefore, that our efforts in the direction of making rural Ontario a more desirable and home-like place are certainly quite in keeping and not incongruous in any sense. We should like to employ a draftsman for this work, and should be able to keep him fully employed, but have not the funds adequate to the purpose. Men trained in landscape drafting are not available at any price, but we have corresponded with two returned soldiers trained in mechanical drafting, either of whom would be able to do our work satisfactorily. They ask one hundred dollars per month, however, which is considerably more than we can pay.

Following is a statement of the outside work done in Landscape Gardening since last report:—

School Ground Planting Plans Furnished.

1. Rural Public	S.S. 30, York Tp.	York County.
2. High and Public	Hawkesbury	Prescott County.
3. Rural Public	Port Credit	Peel County.
4. Rural Public	St. Mary's	Perth County.
5. Rural Public	Stratford	Perth County.
6. Rural Public	Peterborough	Peterborough County.
7. Rural Public	McGillivray Tp.	Middlesex County.
8. Rural Public	S.S. 3, West Zorra Tp.	Oxford County.
9. Rural Public	S.S. 3, Barton Tp.	Wentworth County.
10. Rural Public	S.S. 14, Scarboro' Tp.	York County.
11. Continuation School	Fingal	Elgin County.
12. Rural Public	S.S. 1, Chapman and Croft Tp.	Parry Sound District.
13. Rural Public	S.S. 1, Ameliasburg Tp.	Prince Edward County
14. Rural Public	Parkhill	Middlesex County.

Rural Home Ground Plans Furnished.

1. Lawson, E. V., Lorneside Farm, Goderich.
2. Freeman, M. G., Freeman, Ont.
3. McKay, H. T., Science Hill, Ont.
4. Schuyler, R., Paris, Ont.
5. Blane, J. F., R.R. 1, Renfrew.
6. Edy, J. W., St. Mary's, Ont.
7. Graham, R. J., Belleville, Ont.
8. Fletcher, J. I., R.R. 1, Hannon, Ont.

At the request of Mr. G. R. Green, Woodstock, District Representative for Oxford County, we prepared a plan of a Perennial Flower Border suitable for public school grounds and sent Mr. Green twenty blue prints of the same for use in public schools of his county.

In connection with the instruction of students, each of the thirty-five members of the Second Year class in Landscape Gardening has been required to prepare this term a finished planting plan of his own home grounds. A draft is first submitted for criticism and suggestion, after which a complete plan is prepared under the personal supervision of the Lecturer in charge. Our thanks are due the Department of Physics for the use of their drafting room and equipment in this work.

POULTRY.

A report would be incomplete without mention of the fact that we have been unable to do very much work away from the College owing to a shortage of help. The general work of the Department as regards lectures, etc., requires practically all of our time, particularly when it is remembered that all our experienced men have gone with the army. We have had several changes among the men during the last year. It is out of the question to secure experienced help and we must do the best we can under the circumstances. The frequent changes of help seriously interferes with the experimental work and practically all activities of the Department. It has been well known that change of feeders always disturbs the egg production of the flock, and is about equally true in regard to the growth of young stock.

The price of feeds has been very high during the past year. The price of poultry products has not increased in proportion to the price of feeds. It is true a good laying hen this year has shown more profit than heretofore, but the average hen, very little, if any, profit. Our figures show that during the present year a hen to pay for her feed must lay one dozen more eggs than the number required the year before the war. The price of dressed poultry has been very little, if any, in advance of last year, and some growers have found it unprofitable to produce market poultry.

Egg Production.

The experimental work of the Department for some years now has centred around the problems in egg production. The Department has been trying to develop good laying strains of poultry, particularly with the Barred Plymouth Rock breed. It was felt that this year's work might not be satisfactory owing to the many changes in feeders of both the old and the young stock, but the results are very good and show on the average some increase.

Considerable trouble and annoyance occurred in the securing of metal bands for the young chicks. These bands each bear a number, in which manner the parentage of the birds is traced. Unfortunately, the manufacturer of the bands failed to make them of the usual class of metal and many bands were lost by the young birds on range. This was so serious that the plan of breeding had to be entirely changed and much of the breeding work of the 1917 chicks was lost. This was very unfortunate, and seriously disturbs the plans of breeding.

Other than the pedigree or parentage the hens' egg production is affected by the season of hatching, feeds, housing, etc., and the attendant. Considerable attention has been given to these problems and a few remarks in general might not be out of place.

To test the values of different feeds as they may affect egg production, our results to date would indicate that where the number of individuals used in each feed test is less than three hundred, the results must be used with considerable discretion. This simply means that the variation in the egg producing power of full sisters is frequently very great and that at least three hundred birds are required to indicate the value of the food for egg production.

The influence upon egg production due to improper brooding, feeding, housing, or range, may be so great that all the care exercised in breeding is entirely lost; or, in other words, because a chick comes from high producing parents, it may not be a good bird or a good producer, due entirely to bad management or the attendant.

The time of year the chicken is hatched appears to influence egg production, especially during the winter months.

The breeding work has now proceeded far enough to say there are good laying families of the same breed which will vary in time of maturity on the average as much as thirty days, which means that in order to have a pullet begin laying November 1st, one family requires to be hatched one month earlier than the other. There also appears to be some sympathy between size and time of maturity, or the larger specimens are slower to mature. The best time of the year to hatch the families of Barred Plymouth Rocks that we are breeding has been from about March 26th to May 5th. Hatched earlier than this they are inclined to moult during November and December, and hatched later they do not become sufficiently matured to lay well during the winter. Where the birds have an ideal range and are few in number, they would mature faster, particularly if extra well fed. The strains of White Leghorns we are breeding when hatched between April 1st and May 10th do very well.

The average production of eggs from the pullets hatched in 1916 was higher than that of 1915. There were higher producers among the 1915 birds, one bird laying three hundred and ten eggs, whereas the best this year from one bird was two hundred and seventy-eight eggs. It is not to be expected that a producer of three hundred or more eggs will be bred every year and, moreover, to get such performance requires a feeder of some experience and intuition. If the

general average of the entire flock can be maintained, or slightly increased, it is perhaps all that can be expected during the period of the war.

Below is given the numbers and eggs produced from pullets hatched during March, April and May, of 1916. The pullets hatched in March were put in laying pens on September 1st; the April pullets, October 1st; and the May pullets on November 1st, 1916. Records were kept for the year following:

160 March hatched Barred Rock pullets averaged 165.1 eggs each.
120 April hatched Barred Rock pullets averaged 167.22 eggs each.
90 May hatched Barred Rock pullets averaged 143.56 eggs each.

The average production from the 370 birds was 161.1 eggs each.

During the year there were over thirty thousand eggs from pure-bred stock produced and shipped from the Department for hatching purposes. There were also shipped about five hundred pure-bred cockerels for breeding purposes.

BACTERIOLOGY.

Legume Cultures for Seed Inoculation Prepared and Sent Out.

A total of 2,293 cultures of legume bacteria for seed inoculation were sent out, made up as follows:

Alfalfa, 1,292; red clover, 436; peas, 244; beans, 117; sweet clover, 113; alsike, 55; vetch, 12; sweet peas, 12; mammoth clover, 8; white clover, 4.

Lactic Cultures Prepared and Sent Out.

A total of seventy-eight lactic cultures and sixteen Bulgaricus cultures were sent to creameries and cheese factories.

Specimens Received for Examination and Reported Upon.

The following diseases and abnormal conditions were found in specimens submitted to us from all parts of the Province for examination:

Poultry.

Acute indigestion	1 chick.
Anæmia	1 hen.
Apoplexy	2 cocks.
Blackhead	1 turkey.
Bumble foot	1 hen.
Cystic tumors	Specimens from 2 hens.
Dropsy	2 hens.
Enteritis	5 hens, 2 pullets, 1 cock, 1 chick.
Fatty degeneration	6 hens.
Fowl cholera	2 cockerels.
Goose cholera	1 goose.
Inflammation of abdominal organs	2 hens.
Inflammation of lungs	5 chicks, 1 duck, 1 rooster.
Jaundice	3 hens.
Internal hæmorrhage	1 hen.
Osteritis deformans	Bones from 2 fowls.
Ovaritis	3 hens.
Over-feeding	5 hens.
Peritonitis	3 hens.
Poisoning	4 hens, 1 goose, 1 gosling, 2 roosters, 1 pullet, 1 duck.

Rheumatism .....2 hens; leg and foot from 1 hen.
Roup and fowl pox .....11 hens, 2 cocks.
Rupture of blood vessel .....1 hen.
Rupture of oviduct .....1 hen.
Scaly leg .....2 lumps from cock.
Tuberculosis .....15 hens, 2 pullets.
Tumors .....Specimens from 2 hens.
White diarrhœa .....1 chick.
Worms .....2 goslings, 1 pullet, 2 hens.

Cattle.

Anthrax .....Specimen from lung of steer—negative.
Tuberculosis .....Material from Holstein—positive.

Human.

Diphtheria .....3 specimens: 1 positive, 2 negative.
Tuberculosis .....5 specimens: all negative.

Swine.

Pneumonia .....Specimens from 4 young pigs.

Other Animals.

Poisoning .....1 rabbit.

Plant Diseases.

Bacterial soft rot of potatoes .....1 specimen.
Bean blight .....1 specimen.
Black heart of potatoes .....2 specimens.
Black rot of cabbage .....1 specimen.
Fire blight .....1 specimen.
Late blight of potatoes .....1 specimen.
Black leg of potatoes .....2 specimens.

Milk Samples.

Bacterial counts .....Several—nothing abnormal found.
Indication of udder infection .....1 sample.
Tuberculosis .....1 sample—negative.

Farm Well Water Samples.

Condemned for contamination .....53 samples.
Passed as fit for consumption.....31 samples.
Bacterial counts made for city water works ..... 6 samples.

Experiments in the Bacterization of Peat.

(Continued from 1916.)

Experiments in connection with the bacterization of peat that we were requested to make in 1916 were continued during 1917. Attempts were made to duplicate with lettuce, grown under commercial conditions, the favorable results obtained during 1916 with radishes, and to some extent with lettuce grown in pots following treatment with bacterized peat.

The crude peat used in the 1917 experiments was from the same stock as that used in 1916. The peat was divided into seven one-bushel lots, each lot being placed in a sheet-iron drum with perforated bottom, and differently treated as follows:

Lot 1.—Not bacterized; moistened with water and stirred daily; incubated at 25° C.
Lot 2.—Received a 1-litre rich bouillon culture of mixed soil bacteria and incubated at 25° C.; stirred daily and kept moist.
Lot 3.—Treated same as Lot 2 for two weeks, then sterilized and 1 litre of rich Azotobacter and 1 litre of mixed legume bacteria cultures added and stirred daily for two weeks; incubated at 25° C.
Lot. 4.—Same treatment as Lot 3 with the addition of a rich culture of cellulose-fermenting bacteria at the time the Azotobacter and legume bacteria were added.
Lot 5.—Two hundred and eighty grams $CaCO_3$ added and well mixed in, then treated same as Lot 4.
Lot 6.—One hundred and forty-three grams CaO added and well mixed in, then treated same as Lot 4.
Lot 7.—Original sample of peat untouched.

When the peat was ready for use it was applied to soil as follows: Soil of good texture, but requiring fertilizing material was transferred to a commercial greenhouse. Two beds were made with this soil. One of these beds was manured with rotted stable manure and compost. Both beds were then divided into seven sections, each section to be treated with a separate sample of peat, the one bed being a duplicate of the other except for the manuring. Each of the seven sections of each bed was subdivided into three subsections, to one of which two per cent. of peat was added; to another, ten per cent. of peat, and the third was kept as a check. Twelve lettuce plants were planted in each subsection.

The comparative results in lettuce growth may be summarized as follows:

The bed which was manured previous to having the bacterized peat added gave on the whole a poorer class of lettuce than was yielded by the bed which was treated with the peat alone. It would appear that too much organic matter was present in the bed to give best results.

The subsections to which two per cent. of the peat was added gave, on the whole, better results than those to which ten per cent. was added. The plants where ten per cent. peat was added, whilst usually of good size, had a tendency to become stalky.

The subsections kept as checks, to which no peat was added, gave results almost comparable to those to which ten per cent. was added. Unfortunately, the check subsection in each case was alongside the ten per cent. peat subsection and no dividing wall was placed between them. The appearance of the plants indicated that seepage from the ten per cent. peat subsection found its way to the check subsection, the plants located near the ten per cent. subsection being larger than those further away.

Of the seven lots of peat used one was the original sample untreated. In the bed to which manure was added the addition of this sample of peat gave equally good results to those in which the peat used had been bacterized, and in the bed which was not manured the results were almost as good as in the other subsections where the peat had been bacterized. This favorable result from the use of untreated peat we think was probably due to the prolonged æration or ripening of the peat as it stood in the laboratory for twelve months before use. The bacterization of crude peat is largely to hasten this ripening process.

As a result of these two years' experiments in the bacterization of peat for fertilizer purposes, we conclude that the returns given are not commensurate with the cost of treatment as practised by us in the bacterization of peat.

Fowl Pox and Roup Vaccination.

An outbreak of fowl pox and roup occurred during spring and summer in the College flocks of poultry. It became so serious that after other methods which

were tried had failed to check the outbreak, it was decided to vaccinate by the Mantaufel method which is reported to have given satisfactory but varying results, both as preventative and curative, in a limited number of cases in Wisconsin, California, Michigan and Nevada.

The vaccine was prepared, according to directions, from the exudate and scabs taken from some of the affected birds. The vaccine consists of a suspension of one-half gram of this material pulverized in 100 c.c. of physiological salt solution, attenuated at 55 degrees C. for one hour and filtered; 1 c.c. of this suspension constitutes a dose, injected subcutaneously.

The vaccine was tested on thirty of the worst affected birds, some very bad cases of roup and pox being among them. After three days a marked improvement was noticed and it was then decided to give these a second dose of vaccine and also to vaccinate 460 other birds, both healthy and diseased, in houses where they had been exposed to infection.

Accordingly a second vaccine was prepared in the same manner as the first, and with this the birds were vaccinated.

The results from this second vaccine did not correspond with the results obtained from the first vaccine. After three days many of the sick birds, instead of showing improvement, appeared less lively, as did also some of the birds unaffected with the disease. On the fifth day four deaths occurred, and a post-mortem examination showed that a general toxemia had developed in each case. This toxemia was attributed to the action of the second vaccine. Several other deaths of vaccinated birds, diseased and healthy, occurred at intervals of a few days and post-mortem examination revealed the same toxemic conditions as above. Evidently the second vaccine, while being prepared in the same way as the first vaccine, contained some toxic substance which was not present in the first vaccine. The exudate and scabs from which it was made having been taken from different birds were most probably the cause of this.

From our observations of the action of the vaccine so far we are of the opinion that this method of curing and preventing roup and fowl pox, while it may be effective in some cases, cannot be generally relied upon, as the content of the vaccine as made cannot be controlled.

Pasteurized Milk Investigation.

It was decided to make a bacteriological investigation *re* the pasteurization of milk as practised in two commercial milk pasteurization plants. Mr. Finkelstein had charge of this work. Samples were tested in spring and midsummer. Samples of the raw milk as delivered for pasteurization and of the milk after pasteurization were taken and bacterial counts made. A brief summary of the results follows:

Pasteurization Plant No. I (April and May).

The figures given are the average for 19 samples and represent the number of bacteria per c.c. of the milk.

Raw Milk Before Pasteurization—
Total count per c.c on agar plates 6,800,000
34 per cent. of these were acid formers.
0.74 per cent were B. coli type.
3.9 per cent. were gelatin liquefiers.

After Pasteurization—
Total count per c.c. on agar plates 214,800
23 per cent. of these were acid producers.
0.45 per cent were B. coli type.
6 per cent. were gelatin liquefiers.

When kept 24 hours at 20° C., this pasteurized milk gave a total count of 22,800,000 bacterial colonies per c.c., 38 per cent. of which were acid producers; 0.33 per cent. were B. coli type.

JULY.

The figures given are the average for 11 samples.

Raw Milk Before Pasteurization—
Total count per c.c. on agar plates 11,900,000
57 per cent. of these were acid producers.
2.20 per cent. were B. coli type.
3 per cent. were gelatin liquefiers.

After Pasteurization—
Total count per c.c. on agar plates 37,286
29 per cent. of these were acid producers.
0.03 per cent. were B. coli type.
7.00 per cent. were gelatin liquefiers.

PASTEURIZATION PLANT NO. II (APRIL AND MAY).

The figures given are the average for 10 samples and represent the number of bacteria per c.c.

Raw Milk Before Pasteurization—
Total count per c.c. on agar plates 5,356,000
12.6 per cent. of these were acid producers.
.12 per cent. were B. coli type.
8.40 per cent. were gelatin liquefiers.

After Pasteurization—
Total count per c.c. on agar plates 7,200
23 per cent. of these were acid producers.
.35 per cent. were B. coli type.
8.00 per cent. were gelatin liquefiers.

JULY.

The figures given are the average for 10 samples.

Raw Milk Before Pasteurization—
Total count per c.c. on agar plates 22,300,000
40 per cent. of these were acid producers.
1.30 per cent. were B. coli type.
2.20 per cent. were gelatin liquefiers.

After Pasteurization—
Total count per c.c. on agar plates 11,900
34.8 per cent. were acid producers.
0.7 per cent. were B. coli.
7.7 per cent. were gelatin liquefiers.

The above figures would indicate:

1st. That the raw milk delivered for pasteurization had a high bacterial count, showing that the milk was either old or had been heavily contaminated, or not sufficiently cooled. It was found that this milk was delivered only every two days, so that half the milk at least would be twenty-four hours old before pasteurization.

2nd. That the pasteurization process was not at first so effective as it should

have been. This was shown more particularly by the individual sample analyses rather than by the average figures above quoted. Sufficient care was not taken to maintain the right temperature in the pasteurizer for the proper length of time. Advice was given to maintain a temperature of 145 degrees F. for half an hour, and following this advice better results were obtained.

3rd. The fact that the bacterial content of pasteurized milk when kept for 24 hours at 20 degrees C. jumped from 214,800 per c.c. to 22,800,000 per c.c. indicates the necessity of keeping commercially pasteurized milk in the refrigerator and using it within 24 hours.

Testing a New Method of Pasteurizing Milk for Cheese Manufacture.

A new method of pasteurizing milk by adding 1 part of 3.2 per cent. hydrogen peroxide to 80 parts of milk and heating to a temperature of 125 degrees F. for 30 minutes was recorded by Dr. Guilford in the *New York Medical Journal,* Dec. 2nd, 1916. This treatment induced sterile conditions in the milk, thus making it, according to report, favorable for use by invalids and hospital patients. It was claimed that no chemical changes were induced in the milk so treated.

On the assumption that milk so treated was sterilized, we thought that this method of pasteurizing milk might be of use in the manufacture of cheese. The ordinary method of pasteurizing milk which is satisfactory for buttermaking is not satisfactory for cheesemaking, and as the manufacture and ripening of cheese depends, to a large extent, upon its bacterial content, a satisfactory pasteurization process resulting in the destruction of the harmful bacteria present, followed by the addition of a good lactic starter, is desirable in cheese manufacture if it can only be made practical.

As this new pasteurization process calls for a temperature of only 125 degrees F. instead of 145 degrees F. as required by the ordinary method of pasteurization, we thought it might be a satisfactory method to use in connection with cheese manufacture, and so decided to make a test.

Accordingly, two lots of milk for cheese manufacture were treated by this method: Lot 1, 1 part H_2O_2 per 200 parts milk, and Lot 2, 1 part H_2O_2 per 80 parts milk. Bacterial counts of the milk were made both before and after treatment and samples of the same were kept at different temperatures for twenty-four hours, when bacterial counts were again made for comparison.

These bacterial analyses are recorded below:

EXPERIMENT 1.—JUNE 26, 1917.

Sample and Treatment	Bacterial Count per c.c. of Milk			
	Total on Agar	Acid on Agar	Liquefiers on Gelatin	Colon aerogenes on Aesculin Agar
Before treatment	305,000,000	209,000,000	270,000	340,000
Held 24 hrs. at 20° C	Too numerous to estimate	Too numerous to estimate	Less than 500,000	1,000,000
Held 24 hrs at 25° C	" "	" "	1,000,000	24,000,000
After treatment with 1 part H_2O_2 (3.2% strength) per 200 parts milk, heated to 125° F. for 25 minutes	21,300	16,900	300	None in 2 c.c.
After treatment, held 24 hours at 20° C.	100,000	78,000	Less than 500	Less than 10
After treatment, held 24 hours at 25° C.	65,000	40,000	Less than 2,500	Less than 10

EXPERIMENT 2.—JULY 3, 1917.

Sample and Treatment	Bacterial Count per c.c. of milk			
	Total on agar	Acid on agar	Liquefiers on gelatin	Colon aerogenes on aesculin agar
Before treatment (sampled before starter was added)	19,000,000	15,000,000	200,000	100,000
Held 24 hours at 20° C	235,000,000	40,000,000	.....	1,650,000
Held 24 hours at 25° C	430,000,000	200,000,000	less than 200,000	6,500,000
After treatment with 1 part of H_2O_2 (3.2% strength) per 80 parts of milk, heated to 120° F. for 30 mins.	110	70	30	0
After treatment, cooled and held for 24 hours at 20° C.	100	80	less than 10	0
Held for 48 hours at 20° C.	30,000	7,000	" 1,000	0
After treatment, cooled and held for 24 hours at 25° C.	60	60	less than 10	0
Held for 48 hours at 25° C.	39,000	25,000	" 1,000	0

It will be seen from the above tables that the comparatively low temperature of 125 degrees F. for 30 minutes, when aided by the hydrogen peroxide had a very destructive effect on the bacterial content of the milk. In the first lot where only 1 part H_2O_2 per 200 parts milk was used, the bacterial content was reduced more than is customary by the ordinary method of pasteurization, and in Lot 2 where 1 part of H_2O_2 per 80 parts of milk were used as recommended, there was a lower count still, though the milk was not rendered sterile.

These lots of milk were made into cheese in the ordinary way by the Dairy Department, a lactic culture being added after pasteurization to produce sufficient acidity. After manufacture the cheese were put away to ripen.

After a month to six weeks in the curing room the cheese were tested and found to be of very poor quality. They had no body and no cheese flavor, were soft, and No. 1 was gassy, a hydrogen peroxide flavor persisted.

Bacterial cultures made from the cheese showed that lactic acid bacteria were present in fair numbers mixed with other species, including a spore former and oidium lactis.

It would appear that the hydrogen peroxide had interfered very detrimentally with the ripening process of the cheese, spoiling the body, texture and flavor.

Testing for Bacterium Pullorum.

Prof. W. R. Graham, of the Poultry Department, requested us to test his breeding stock for Bact. pullorum, the cause of bacillary white diarrhœa of chicks. The test used is the agglutination test as devised by Rettger. Two of our specialists who graduated last year, Mr. A. Davey and Mr. Murdoch, were engaged to do the work, under our supervision. Two hundred and fifty birds were tested, some three years old, some two years old and some one year old. A high percentage of positive reactors were found in the three-year-old stock, a lower percentage in the two-year-old stock, and only a very small percentage in the one-year-old stock. Contrary to expectations, a number of the birds giving positive reaction showed the best records for hatchability of eggs and vitality of chicks hatched, while some of those giving negative reactions had low records in this connection.

It is intended to continue this investigation.

Publications.

An illustrated bulletin on "Tuberculosis of Poultry in Ontario" has been issued.

Text matter on "Bacterial Diseases of Plants" has been prepared for use in a bulletin on "Plant Diseases—Fungus and Bacterial" to be issued conjointly by this Department with the Biology Department.

Various articles on bacteriological problems have been prepared on request for the press.

Agricultural Exhibitions.

Morbid specimens of various bacterial diseases of animals and plants, photographs, text-matter, contaminated milk specimens and other bacterial preparations were used at a number of agricultural exhibitions for educational purposes.

DRAINAGE.

The number of surveys this year was 255 as against 318 last year. The decrease was due to scarcity of suitable men for the work, as we had 343 applications, showing 88 held over. Efforts have been made to secure permanent men for the survey work, but the supply of men is very limited.

Table 1 gives a summary of the surveys made since the inception of the work, and table 2 shows the distribution of those made during 1917.

TABLE No. 1.—SUMMARY OF SURVEYS.

Year	Appropriation	Applications	Surveys	Held Over	Acres Surveyed	Miles of Drain	Demonstrations	
							No.	Average Attendance
	$							
1906	Nil	15	15	.....	500	45	.....	.....
1907	Nil	126	70	56	3,500	350	.....	.....
1908	1,000	166	100	66	5,000	510	43	.....
1909	1,000	302	179	121	5,157	613	48	18.0
1910	4,000	518	383	135	14,672	1,800	132	23.6
1911	4,000	414	327	87	15,211	1,864	142	17.4
1912	4,000	430	293	137	17,212	2,278	70	21.7
1913	4,000	290	247	43	13,705	1,713	56	20.3
1914	4,000	296	250	46	13,386	1,673	23	20.9
1915	4,000	291	263	28	15,336	1,917	8	12.8
1916	4,000	367	318	49	14,694	1,731	4	65.0
1917	4,000	343	255	88	11,988	1,489	.....	.....
Totals	.....	.....	2,700	.....	130,361	15,963	526	.....

TABLE No. 2.—SHOWING NUMBER OF SURVEYS MADE IN EACH COUNTY DURING THE SUMMER OF 1917.

County	No. of Surveys	County	No. of Surveys
Brant	3	Middlesex	9
Bruce	7	Norfolk	24
Carleton	1	Muskoka	1
Durham and Northumberland	1	Ontario	1
Elgin	1	Oxford	19
Essex	36	Parry Sound	1
Grey	5	Perth	11
Halton	5	Peterborough	1
Hastings	1	Simcoe	13
Huron	5	Waterloo	2
Kent	34	Welland	2
Lambton	7	Wellington	18
Lanark	1	Wentworth	22
Lincoln	7	York	17

RESULTS OF DRAINAGE FOR YEAR 1917 ON DRAINAGE DEMONSTRATION PLOTS.

In all twenty-eight drainage demonstration plots have been installed, no new ones having been added in 1917. To date reports from thirteen of these have been received for the past harvest. Six of these were under oats, five under hay and two under wheat, but on one of these the midge damaged the crop so that the report cannot be used as there is no indication whether the midge was worse on the drained or undrained. Table 3 gives a summary regarding the plots. From this it will be seen that on the plots in hay the average increase due to drainage was $4.95, practically $5.00 per acre.

TABLE No. 3.—RESULTS OF DRAINAGE FOR YEAR 1917 ON DRAINAGE DEMONSTRATION PLOTS.

Owner	Address	Soil	Crop	Yield per acre in bushels		Increase	Value of increase per acre
				Undrained	Drained		
J. S. Switzer ...	Glanford	Clay Loam.	Hay...	1 ton	1.5 ton	.5 ton	$ 5 50
S. W. Lloyd.....	Belleville.....	"	" ...	1 "	1.25 "	.25 "	2 75
L. Kerr	Harrowsmith ..	"	" ...	1 "	1.5 "	.5 "	5 50
B. Matchett.....	Stewart's Hall.	"	" ...	1 "	1.5 "	.5 "	5 50
R. L. Jameison..	Renfrew.....	Clay	" ...	1 "	1.5 "	.5 "	5 50
M. Barr	Beachburg.....	"	Oats...	35 bush.	50 bush.	15 bush	9 00
N. McDougald...	Tara	"	" ...	20 "	75 "	55 "	33 00
A. J. Galbraith..	Hornby.....	Heavy Clay	" ...	35 "	38 "	3 "	1 80
W. D. McLeod...	McCrimmon....	Loam.....	" ...	23 "	25 "	2 "	1 20
John McQueen ..	Arthur	"	" ...	25 "	40 "	15 "	9 00
M. Jordan.....	Parker	"	" ...	32 "	38 "	6 "	3 60
D. Climenhauge .	Stevensville ...	Clay.....	Wheat.	32 "	36 "	4 "	8 80
C. J. Zavitz	Marshville.....	Loam	" ...	15 "	15 "	Midge	damaged grain
J. Bunn	Cayuga.....	Clay Loam.	no report				
A. Snell.....	Hagersville	"	"				
P. Early.....	Norval	"	"				
W. Carson	Dundalk.....	"	"				
N. McFarlane ...	New Liskeard..	"	"				
S. Culver.....	Rainham Centre	Heavy Clay	"				
P. McLeod	Ingleweed	"	"				
A. A. McLennan.	Lancaster	Loam.....	"				
A. Matchett.....	Stewart's Hall.	Clay Loam.	"				
W. Moreland....	Sunbury.....	"	"				
H. Hunter	Napanee.....	Loam.....	"				
J. H. Dickinson..	Mount Hope....	"	"				
W. J. Goulding..	Arthur	"	"				
J. Gainor	"	"	"				
Jos. Giles	Gordonville	"	"				

On these plots in oats the average increase was $9.60 per acre, not counting any difference in straw. Reports in other years have shown an average difference of from one-third to one-half a ton per acre, which at $6 per ton would be worth $2 to $3, say $2.50 on the average, which added to the $9.60 for grain would make a total of $12.10 or practically $12.00 per acre. It should be borne in mind that these results were obtained on plots most of which were giving fair returns before being drained.

DRAINAGE INVESTIGATIONS.

Regarding drainage investigations Mr. Scott reports as follows:

The investigation work on Mr. Galbraith's plot was a continuation of that done in 1915 and 1916. The soil moisture results, the relation of drainage flow to rainfall and the results on movement of the water table along with the soil temperature results were such as to corroborate the results of the investigation of 1916.

We are continuing the experimental work in determining the effect of muck soil on the different qualities of concrete tile. We are also continuing the work done on finding the effect of frost on clay and concrete tile.

The work which was done with the subsoil plow did not appear to make any material difference in the yields of this year's crop where the experiments were held. It is our purpose, however, to continue this subsoil work.

Several moving picture films were taken which illustrated different phases of

drainage work. Machinery has been installed for the manufacture of concrete tile, and it is our intention to carry on experiment work with concrete tile.

Two successful short courses were held last winter, one at the College and one at Petrolia, the attendance at the former being eighteen, and at the latter thirteen.

FIELD HUSBANDRY.

Although we take our full share of teaching in connection with the long and the short courses this amounts to a comparatively small percentage of the work of the Department of Field Husbandry. The experiments conducted on about two thousand five hundred plots require a large amount of careful work. The co-operative experiments throughout Ontario carried on through the medium of the Ontario Agricultural and Experimental Union on between four and five thousand farms brings this Institution in very close touch with the crop production of the Province. It is interesting to note, that although in the earlier part of the war the number of co-operative experimenters decreased somewhat, the number in 1917 has been actually greater by a few hundred than in the year previous. Even in spite of the fact that labor has been exceedingly scarce we see marked evidence of the desire of the farmers to get started with seed of the highest quality and to keep in touch with the most approved methods for increased crop production in Ontario.

Increased Production.

It seems evident that the farmers, as a whole, have put forward tremendous efforts to increase crop production during the past year. It is believed that greater care was exercised than ever before in sowing seed of the highest quality and at the best dates for the highest returns. Agricultural articles were sent out from this Department to the public press in the early part of the year with the object of giving helpful information in crop production. These were printed in practically all of the agricultural journals and many of the daily and the weekly papers throughout the Province.

Owing to the great scarcity of labor much depends upon the planning of the farm operations in the winter season so as to economize the summer labor to the greatest extent possible. The following suggestions are based on the results of experiments and on observations, and are submitted as reminders for the winter season:

1. Carefully plan the crop production for the season at an early date.
2. Thoroughly clean and grade the grain so as to procure the large, plump, sound and well matured seed.
3. Test the germinating power and the vigor of the seed before time to sow.
4. Overhaul implements and machines so as to be ready to start seeding early, and to sow each class of crop at the best time for highest results.
5. Arrange for at least a small amount of such cultivated crops as beans, potatoes, turnips and corn.
6. Watch and destroy the weeds before they are able to make much headway.
7. Economize man labor by using three and four horse teams when possible.
8. Plan so as to make the best use of the unskilled labor which is available.

Ontario's Oat Crop.

The oat crop of Ontario in 1917 will probably be valued at about seventy-five million dollars. This is a great increase over normal years owing to an average acreage, a good yield and high prices. As oats furnish food for domestic purposes, as well as feed for farm stock, the high production in Ontario at this particular time is proving of great service. The increase in yield per acre is undoubtedly due to a certain extent to the increased cultivation of the O.A.C. No. 72 variety of oats throughout the Province.

The O.A.C. No. 72 variety of oats was started at the Ontario Agricultural College from a single seed in 1904. It was carefully tested with numerous varieties, selections and hybrids until 1911 when it was introduced over Ontario in pound lots for co-operative tests through the medium of the Ontario Agricultural and Experimental Union. It did exceptionally well on many farms and the experimenters rapidly increased the seed. It appears to be displacing many of the old varieties of oats and even the Banner which had for many years been the most extensively grown variety in the Province. Fields of the O.A.C. No. 72 variety of oats were soon entered in competition with other fields through the Field Crop Competitions conducted under the auspices of the Agricultural Societies. The O.A.C. No. 72 and the Banner varieties have each taken *first* prizes in the Ontario Field Crop Competitions as follows:

Year	"Banner"	"O. A. C. No. 72"
1913.....	41	1
1914.....	34	20
1915.....	33	48
1916.....	26	76

At the Provincial Winter Fair entries have been made of the O.A.C. No. 72 oats in each of the past four years as follows: 1913, 5; 1914, 36; 1915, 57, 1916, 71.

In 1916, there were more entries for this oat than for all other varieties combined and more than three times as many as those for the Banner. This popular oat is having a marked influence in increasing production and it is worth millions of dollars to Ontario annually.

Ontario's Wheat Crop.

Special efforts have been made during the past year to encourage the increase of both fall wheat and spring wheat in Ontario. Copies of a winter wheat circular giving results of experiments at the College and throughout Ontario were printed and distributed to the extent of about eight thousand, including upwards of four hundred which were sent to the agricultural, weekly and daily papers in Ontario.

With the object of originating better varieties than those already in cultivation crosses have been made between the Dawson's Golden Chaff and some of the varieties of particularly high quality for bread production such as Tasmania Red, Crimean Red, Turkey Red, Buda Pesth, Bulgarian and Imperial Amber. In the average tests for the last five years crosses between the Dawson's Golden

Chaff and the Tasmania Red, Turkey Red and Bulgarian have each surpassed in average yield of grain the highest yielder of all the named varieties.

A new variety has been originated by crossing the Dawson's Golden Chaff and the Bulgarian which has made a high record surpassing both its parents in average yield per acre. It is about equal to the Bulgarian in bread production. Under the name of O.A.C. No. 104 this variety was distributed for the first time over Ontario in connection with the co-operative experiments in the autumn of 1916. The reports which have been received show that the O.A.C. No. 104 variety of winter wheat made a good record throughout the Province and was the most popular with the experimenters of the five varieties used in the co-operative tests. It is a vigorous grower with comparatively stiff straw. The grain is white and of good quality for bread production. It resembles the Dawson's Golden Chaff in being beardless, and the Bulgarian in having a white chaff. Whether or not this new variety of winter wheat will exert as great an influence in crop production in Ontario as has the O.A.C. No. 21 barley and the O.A.C. No. 72 oats time will tell.

The Bean Crop.

In the spring of the present year this department urged the increase in the acreage of beans more than any other field crop. The field beans approach animal foods in nutritive value. They contain a high percentage of protein and in this respect surpass the cereals commonly used as food such as wheat and oats. There is a higher percentage of protein in beans than in the best cuts of meat but it is not quite so completely digested. Protein is a nutrient which serves to build and repair body tissues as well as to furnish energy. It performs essentially the same part in nutrition whether it is from beans, peas, wheat, meat, milk or cheese.

For growing commercially in Ontario the small white pea beans were recommended. They usually give an average of about seventeen bushels per acre, and the grain is of high quality and can be easily exported in bulk as a dry concentrated food product. Not only has the College been instrumental in conducting experiments both at the College and throughout the Province with the bean crop, the results of which were embodied in Bulletin No. 232 on "Field Beans," but also in the spring of the present year it co-operated with the Natural Resources Committee in purchasing several hundred bushels of beans in order that they might be safeguarded for seed purposes for the farmers of the Province.

It is interesting to note that the area of beans was about 115,000 acres in 1917, being more than double the acreage of the year previous. Unfortunately, the weather conditions have been quite unfavorable for a good crop of beans in the past year. According to the August report of the Bureau of Industries, however, the total production of beans in Ontario was likely to be nearly three times as great in 1917 as the crop of the previous year.

Seed Potatoes for Ontario.

Experiments have been conducted in the Field Husbandry Department in testing seed potatoes obtained from different sources. Eighteen lots of Empire State potatoes were secured from eight different sources, five being in the Province of New Brunswick and three in Ontario. In each of the four years of this experiment it was found that the seed potatoes grown about one hundred and forty miles north of Guelph in Muskoka district, near the Muskoka Lakes, gave a higher yield per acre than those obtained from any other source. The average

results show that the yield in bushels per acre for Old Ontario was 167, for Muskoka, 301, and for two sections in New Brunswick, 220 and 237 respectively. Somewhat similar results to those obtained at Guelph have been secured by other experimenters in Europe and in America. Seed potatoes grown in Scotland gave excellent results in the experiments conducted on the Experimental Farm of Cambridge University, of Durham Agricultural College and of the Royal Agricultural Society at Woburn. Mr. W. T. Macoun of the Central Experimental Farm, Ottawa, has obtained high records from seed potatoes grown in Saskatchewan. It is a common practice of many of the potato growers of the warmer climates to purchase their seed potatoes from northern districts which possess a cool climate. Potatoes which are grown in a locality where the summers are comparatively cool and where the tubers do not reach their full stage of maturity in the autumn give better results than the potatoes produced in a warmer climate, and especially with a hot dry period in July or August and where the potatoes become thoroughly ripened.

In 1917, seed potatoes were obtained north of Lake Superior in New Ontario and were tested at both the Experimental Farm at Ottawa and at Guelph with very satisfactory results.

The latter part of July and during August of the present year the writer, in company with Mr. Justus Miller, Assistant Commissioner of Agriculture for Ontario, and Mr. W. A. McCubbin, Dominion Plant Pathologist, St. Catharines, visited the potato sections in Northern Ontario, including Algoma, Sudbury, Rainy River, Thunder Bay, Kenora, Temiskaming, Nipissing, Parry Sound and Muskoka. Northern Ontario appears to be particularly well adapted for the production of seed potatoes of high quality. Although there is some disease in the northern districts the amount is comparatively small, and we believe that with care seed can be grown for southern Ontario which is comparatively free from disease.

In the latter part of August and early in September the writer, in company with Mr. Miller and Professor J. E. Howitt, visited three of the principal commercial potato growing centres in Old Ontario, viz.: Caradoc Township, Middlesex County; Erin Township, Wellington County; and Gloucester Township, Carleton County. In Caradoc we found practically all farmers growing one variety of potatoes, viz., the Dooley. In Gloucester the commercial growers were practically all using red potatoes such as the Maggie Murphy, the Dakota Red and the New Wonderful. In Erin Township a large number of varieties were used, in some instances even five or six different kinds being found on the one farm. As the result of these potato investigations, and of small conferences in connection with the potato improvement work, a representative conference was held in the Parliament Buildings, Toronto, on the 30th and 31st of October, and a committee of ten was appointed which met on November 1st at which the writer was appointed Chairman, and Mr. Justus Miller, Secretary. At this Committee meeting the following recommendations were formulated:

1. That the Irish Cobbler be recommended as a standard early variety for commercial purposes, and Early Ohio as an extra early variety for market gardeners to meet the requirements of special markets. The Green Mountain was recommended as a standard late variety, with certain other late varieties as Carman No. 1, Dooley, Rural New Yorker No. 2, etc., recognized as standard varieties, and be recommended for those districts where conditions are peculiarly favorable to their growth. Where a variety was found especially suited to the conditions, farmers were advised to confine their attention to such variety.

2. That owing to the serious diseases known to have become established, a staff of competent pathologists, consisting of eight or ten men who specialized in potato diseases, be appointed. It was suggested that these specialists rogue the best potato fields in Northern Ontario of impurity and disease, and to do everything in their power to give the individual potato growers all the information possible regarding the eradication of disease and the best methods of crop improvement.

3. That in regard to a supply of northern grown seed, this should be secured at once to be used for experimental and demonstration purposes, and the committee suggested that plans be made by the Government to aid farmers and growers to locate a supply of the best northern grown seed.

4. That a part of one or several Government farms in Northern Ontario be used for growing a supply of the highest quality seed.

5. That the Ontario Government initiate an educational campaign to the end that potato growers be fully informed of the seriousness of the disease prevalent in the Province, and the growers be made cognizant of the desirability of seed potatoes grown in Northern Ontario.

6. That a committee be appointed to study grades and grading, not only for the Province, but for the Dominion.

7. That a potato specialist be appointed by the Ontario Government to have charge of all potato extension work in the Province; to organize the improvement scheme in its broader phases; to direct all publicity and educational campaigns, etc.

8. That an advisory council be appointed to enable the potato specialists to work efficiently and without friction, and that this council should represent every interest comprehended in this scheme and potato extension work.

Home Grown Mangel Seed.

Previous to the war practically all of the mangel seed used in Ontario was imported from Europe. For the past ten years experiments have been conducted at the Agricultural College in the production of home grown seed. In almost every year the home grown mangel seed has given very satisfactory results, even better than that imported from Europe. In 1916, owing to the very abnormal weather conditions, mangel seed production in Ontario was practically a failure. In the present year, however, the crop has grown satisfactorily, and about 1,700 pounds of good seed was produced from one acre of land. This seed is of a specially selected strain of the Yellow Leviathan variety of mangels and will be used as foundation stock for seed production in Canada.

We suggest that each farmer plant a few mangel roots in the spring of 1918 to produce seed for his own use. Roots are usually planted thirty inches apart each way and produce from four ounces to one pound of seed per plant.

MACDONALD INSTITUTE.

The Work in General.

The courses of instruction as indicated in the College calendar, have been carried out, and the work is running smoothly.

About Easter time we were notified that the Public School classes which since 1903 have provided practice-teaching for our Normal students, would be cut off within a week. Prompt appeal to the School Board resulted in the continuation of

the classes until the end of June. During the summer we made an agreement with the Guelph Separate School, which provides us with one class for practice-teaching, and a similar agreement with the Consolidated School, which provides two more. In addition we have agreed to teach two sewing classes for the Consolidated School.

At present we are trying the experiment of giving a third year of work to Associate graduates. It promises well, and eventually may lead to a Dietitian Certificate.

Following are the detailed statistics of the different classes of work.

The Normal Course in Domestic Science.

Twelve entered this course in 1915: eleven passed to the senior class in 1916; eight passed the final examinations last June and have received the Macdonald Institute Teacher's Certificate in Domestic Science. Fifteen were admitted to the junior class in September, 1916: twelve passed on to the senior class last September, and are now in attendance. Thirteen entered the junior class last September and are now in attendance.

The Associate Course.

Fifteen entered this course in 1915; eleven passed on to the senior class in 1916: five passed the final examination last June and have received the Macdonald Institute Associate Diploma. Twelve were admitted to the junior class in 1916; nine passed on to the senior class last September and are now in attendance. Sixteen entered the junior class last September and are now in attendance.

Many graduates of this course seek entrance to the Dietitian field, in spite of our opinion that the course does not give sufficient training. To encourage them to better preparation, we are offering Associate graduates a third year of training which includes some of the lectures and much of the practical work of our senior normal and housekeeper students. Four of last June's graduates returned for this work, and three are now in attendance.

The Housekeeper Course.

Eight entered this course in September, 1915; eight passed on to the senior class in 1916; six passed the final examinations and have received the Macdonald Institute Housekeeper Certificate. Twelve entered the junior class in 1916; nine passed on to the senior class last September and are now in attendance. Twenty-one were admitted to the junior class last September, and twenty are now in attendance.

The Homemaker Course.

Twenty-eight entered the course in September, 1916; nine passed their final examinations and have received the Macdonald Institute Homemaker Diploma. Nine entered the course last January, of whom six passed the final examinations of December, 1917, and have also received the Homemaker Diploma.

The Short Courses in Domestic Science.

These had in attendance in the

Winter term, January to March	28
Spring term, April to June	13
Autumn term, September to December	15

Other Students.

Eight Optional students joined various sewing and lecture courses through the year.

Five Student-workers have taken the opportunity to pay for courses by service in Macdonald Hall.

Report of Loan Collection Work for Women's Institutes.

Requests—

Home interests	62
House and housekeeping	49
Food and cookery	125
Dietetics	17
Health	25
Household finance	26
Education—home economics and general	31
Clubs, social service, etc.	99
Gardening and agriculture	11
Patriotic	42
Miscellaneous	52
Total	539

Answered by—

1,394 folders with pamphlets, articles or clippings.
34 books.
28 special letters.
37 letters regretting material out.
32 letters referred to Mr. Putnam, or to other Departments of the College.

Appointments of Macdonald Institute Graduates in 1917.

Teachers.

	Class of	Appointed to
Miss M. Birkett	1917	Agricultural School, Olds, Alta.
" R. M. Black	1914	Agricultural School, Vermilion, Alta.
" G. Boggs	1911	Public Schools, Cobourg, Ont.
" A. Carpenter	1911	Public Schools, Hamilton, Ont.
" M. Cockburn	1915	Public School, Guelph, Ont.
" F. Cooke	1917	Ladies' College, Halifax, N.S.
" R. Fraser	1917	Macdonald Institute, O.A.C., Guelph, Ont.
" M. Goldie	1910	Normal School, Calgary, Alta.
" L. Grothier	1915	Public School, Nelson, B.C.
" M. Hiltz	1914	Normal School, Regina, Sask.
" F. Hotton	1914	Technical School, Sault Ste. Marie, Ont.
" E. MacVannel	1904	Normal School, Peterborough, Ont.
" H. Pilkey	1914	Public School, Chatham, Ont.
" E. Pinel	1912	Classes in Danville, Que.
" E. Rogers	1915	Macdonald Institute, O.A.C., Guelph, Ont.
" L. Ross	1912	Technical School, Ottawa, Ont.
" E. Smith	1917	Macdonald College, Que.
" M. B. Watson	1916	Public Schools, Swift Current, Sask.

Housekeepers and Dietitians.

	Class of	Appointed to
Miss E. Birdsall	1917	General Hospital, Regina, Sask.
" M. Dunbar	1916	Kitchener-Waterloo Hosp., Kitchener, Ont.
" E. Elliot	1917	McKellar General Hospital, Ft. William, Ont.
" E. Fearman	1912	City Hospital, Hamilton, Ont.
" N. Goldie	1914	Sherbourne House, Toronto, Ont.
" E. H. Grant	1917	Miss Edgar's School, Montreal, Que.
" P. Gray	1915	City Hospital, Hamilton, Ont.
" J. Hall	1916	Wells College, Aurora on Cayuga, New York State, U.S.A.

	Class of	Appointed to
Miss H. Hepburn	1914	General Hospital, Guelph, Ont.
" J. McIlquham	1916	Calydor Sanitarium, Gravenhurst, Ont.
" A. Murray	1917	Nicholls Hospital, Peterborough, Ont.
" B. Roulston	1914	Galt Hospital, Lethbridge, Alta.
" E. Schwalm	1914	Y.W.C.A., Montreal, Que.
Mrs. Simmons	1911	General Hospital, Toronto, Ont.
Miss M. Taylor	1912	Bellevue Hospital, New York City, U.S.A.
" I. Weseloh	1907	City Hospital, Stratford, Ont.
" M. Witmer	1917	Y.W.C.A., Calgary, Alta.
" L. Beattie	1914	Military Hospital, Guelph, Ont.
" J. Bradley	1915	Queen Alexandra Hospital, London, Ont.
" M. Corrigan	1913	Military Hospital, Kentville, N.S.
" E. Dobson	1912	Military Discharge Depot, Halifax, N.S.
" J. Flavelle	1910	Military Hospital, Cobourg, Ont.
" L. McLellan	1911	Strathcona Hospital, Edmonton, Alta.
Mrs. MacPhadyen	1914	New York Base Hospital Unit, Overseas.
Miss M. MacTavish	1911	Spadina Military Hospital, Toronto, Ont.

OTHER WORK.

	Class of	Appointed to
Miss G. Conover	1915	County Agent, New York State, U.S.A.
" B. McDermand	1915	Women's Institute Work, Alberta.
" E. Master	1915	County Agent, New York State, U.S.A.
Mrs. J. Muldrew	1907	Food Controller's Office, Ottawa, Ont.

SUMMARY OF ATTENDANCE IN 1917.

A.—January to June, completing the College year 1916-1917.

1. Normal Domestic Science—two year course:
   - (*a*) Juniors 15
   - (*b*) Seniors 10
2. Associate—two year course:
   - (*a*) Juniors 10
   - (*b*) Seniors 8
3. Housekeeper—two year course:
   - (*a*) Juniors 12
   - (*b*) Seniors 8
4. Homemaker—one year course 34
5. Short Courses in Domestic Science:
   - (*a*) Winter term students 28
   - (*b*) Spring term students 13
6. Optional Students 7
7. Student-Workers 3
8. Public School Classes 68

B.—September to December, opening the College year 1917-1918.

1. Normal Domestic Science—two year course:
   - (*a*) Juniors 13
   - (*b*) Seniors 12
2. Associate—two year course:
   - (*a*) Juniors 16
   - (*b*) Seniors 9
   - (*c*) 3rd Year—special course 4
3. Housekeeper—two year course:
   - (*a*) Juniors 21
   - (*b*) Seniors 9
4. Homemaker—one year course 25
5. Short Course in Domestic Science 15
6. Optional Students 1
7. Student-Workers 2
8. Consolidated School Classes 33
9. Separate School Class 20

C.—Students counted in both above lists 36

D.—Total number of students in 1916..... 312

Total number of students in 1917..... 360

NOTE.—The larger total of 1917 is due chiefly to the new classes from the Consolidated and Separate Schools.

List of Graduates from Home Economics Courses in 1917.

Graduates of the Normal Course in Domestic Science:

1. Miss Mary Birkett.....Box 231, Niagara Falls, Ont.
2. " A. Mabel Geddes.....16 Pearl St., St. Thomas, Ont.
3. " B. Jennie Grant.....Duthill, Ont.
4. " Aleda Lammiman.....Currie's Crossing, Ont.
5. " Dorrit L. McCully.....30 Botsford St., Moncton, N.B.
6. " F. Christine MacIntyre.....Kemptville, Ont.
7. " Laura Nixon.....St. George, Ont.
8. " Elizabeth Wallace.....Seagrave, Ont.
9. " Mary E. Duff.....Cookstown, Ont.

Graduates of the Housekeeper Course:

1. Miss Etta Birdsell.....R.R. No. 1, Courtland, Ont.
2. " Edith Elliot.....Morrisburg, Ont.
3. " E. Helen Grant.....43 Forbes Ave., Guelph, Ont.
4. " Edith M. O'Flynn.....Shelburne, Ont.
5. " Helen Winlow.....24 Arthur St., Guelph, Ont.
6. " Mabel A. Witmer.....Sub. P.O. No. 2, Victoria, B.C.

Graduates of the Associate Course:

1. Miss Margaret Creelman.....O.A.C., Guelph, Ont.
2. " Elizabeth Langford.....Cobourg, Ont.
3. " Edna W. Montgomery.....Suite 7, Hugo Apts., Winnipeg, Man.
4. " Marie L. Sheridan.....15 Forest Hill Road, Toronto, Ont.
5. " Verna L. Smith.....339 Davis St., Sarnia, Ont.
6. " Mabel Balkwill.....146 Wellington St., St. Thomas, Ont.
7. " Doreen Bright.....447 Somerset St., Ottawa, Ont.
8. " Dorothy Chown.....Union St., Kingston, Ont.

Graduates of the Homemakers' Course:

C.—Homemakers.

1. Miss Gladys E. Anderson.....167 Lowther Ave., Toronto, Ont.
2. " Margaret Hornel.....Muirkirk, Ont.

A.—Homemakers.

1. Miss Frances V. Burton.....11 Spruceside Ave., Hamilton, Ont.
2. " H. Doris Hays.....Goderich, Ont.
3. " M. Louise Kennedy.....68 High Park Blvd., Toronto, Ont.
4. " Jean Maxwell.....Leamington, Ont.
5. " A. Janet Strang.....R.R. No. 1, Hensall, Ont.
6. " Helen B. Sullivan.....2210 Longest Ave., Louisville, Ky., U.S.A.
7. " Rosa V. Teeple.....R.R. No. 4, Woodstock, Ont.
8. " Marion C. Wilkinson.....45 Blair Rd., Galt, Ont.
9. " Eleanor C. Willmott.....467 Huron St., Toronto, Ont.

B.—Homemakers.

1. Miss Margaret E. Cockshutt.....152 Dufferin Ave., Brantford, Ont.
2. " Maude L. Cockshutt.....172 Chatham St., Brantford, Ont.
3. " Irene Davidson.....Mimico Beach, Ont.
4. " Mary McLeod.....R.R. No. 3, Embro, Ont.
5. " Hazel Richter.....87 Delaware Ave., Hamilton, Ont.
6. " Edith Williams.....St. Vincent St., Goderich, Ont.

Changes in the Staff.

Macdonald Institute suffered a sad loss last July, in the death of Miss Greenwood, our critic teacher and instructor in Normal Methods since 1904. The success of many Macdonald Institute teacher-graduates is due in large measure to her careful work, and we shall not cease to miss her.

Miss Job, already on our staff, has been put in Miss Greenwood's place and is doing very satisfactory work.

Miss Rogers has been taken on as Laundry instructor, replacing Miss Job.

Miss Eliza Maddock, on account of ill health, gave up her duties as Supervisor of House Practice.

FINANCIAL STATEMENT, 1917

COLLEGE DEPARTMENT.

Expenditure.

Salaries and wages	$86,876 90
Servants' paylist	6,480 64
Meat, bread, groceries, laundry, engine room supplies and fuel	50,489 00
Advertising, printing, postage and stationery	3,996 48
Expenses, Short Courses	1,699 45
Temporary assistance	3,695 95
Student labor	3,454 38
Travelling expenses and extra lectures	1,998 47
Library	1,991 35
Expenses, College Judging Team	200 00
Scholarships	110 00
Telephone service, rents, etc.	655 00
Furnishings and repairs	4,799 86
Sewage	572 00
Contingencies	1,349 29
Maintenance, 5 laboratories and gymnasium	7,798 62
Total expenditure	$176,167 39
Less revenue	32,763 06
Net expenditure	$143,404 33

Revenue.

Board	$24,156 80
Tuition and laboratory fees	7,714 00
Chemical analyses	70 50
Rent of rooms	134 00
Rent of cottages	220 00
Rent of post office boxes	41 25
Supplemental examinations	38 00
Fines, breakages and extra meals	250 04
Sundries	138 47
Total revenue	$32,763 06

Student Labor.

(12 months.)

Total per Month.

November and to December 2nd	$428 53
January	411 91
February	236 85
March	165 99
April	129 88
May	90 52
June	474 01
July	870 30
August	157 67
September and October	488 72
Total	$3,454 38

To Different Departments.

College	$219 59
Chemical	41 75
Botanical	13 71
Bacteriological	6 75
Physical	55 93
Entomological	1 71
Gymnasium	97 66
Library	114 52
Farm	743 94
Experimental	230 05
Dairy	17 34
Poultry	238 62
Horticulture	1,454 44
Mechanical	174 33
Apiculture	44 04
Total	$3,454 38

MACDONALD INSTITUTE AND HALL.

Expenditure.

Salaries and wages	$17,194 50
Servants' paylist	2,188 18
Meat, bread, groceries, furnishings, repairs, engine room supplies, fuel and labor on grounds	20,099 66
Library and stationery	365 20
Maintenance of laboratories in Institute	2,976 93
Total expenditure	$42,824 47
Less revenue	21,347 65
Net expenditure	$21,476 82

Revenue.

Board	$13,684 90
Tuition	7,382 00
Supplemental examinations	28 00
Fines, breakages, etc.	249 75
Sundries	3 00
Total revenue	$21,347 65

FARM DEPARTMENT.

Expenditure.

Permanent improvements	$913 01
Wages of men, foreman and stenographer	10,154 21
Purchase and maintenance of stock	9,399 81
Farm maintenance, including repairs, blacksmithing, binder twine, seed, furnishings, fuel, light, advertising, printing, stationery, tools, implements, etc.	2,999 64
Contingencies	349 79
Total expenditure	$23,816 46
Less revenue	15,043 30
Net expenditure	$8,773 16

Revenue.

Sale of Cattle:—		
12 Heifers at from $70.00 to $260.00	$1,945 00	
4 Bulls at from $240.00 to $450.00	1,430 00	
11 Calves at from $4.00 to $325.00	1,043 00	
1 Cow and Calf	600 00	
9 Cows at from $77.50 to $245.00	1,130 50	
2 Steers, 3,570 lbs., at from $11.00 to $14.50 cwt.	454 65	
1 Steer	85 00	
5 Calves, 4,080 lbs., at $10.00 cwt.	408 00	
		$7,096 15
Sale of Pigs:—		
37 Sows at from $18.00 to $81.00	$1,199 50	
1 Sow and Litter	62 00	
7 Boar Pigs at from $12.00 to $50.00	133 00	
40 Hogs, 7,750 lbs., at from $12.10 to $17.70 cwt.	1,308 44	
		2,702 94
Sale of Sheep:—		
7 Rams at from $18.00 to $26.00	$150 00	
6 Ewes at $27.00	162 00	
3 Sheep at $9.00	27 00	
2 Lambs at $15.00	30 00	
		369 00
Sale of Milk:—		
25,632½ quarts at 4c.	$1,025 30	
122,510 lbs. at from $1.25 to $1.80 cwt.	1,938 13	
		2,963 43

Service of animals		151 00
Sale of 1 old horse		160 00
Sale of 506.3 lbs. wool at .60		303 78
Feed of Horses:—		
11 Horses for 1 year at $50.00	$550 00	
9 Horses for 1 year at $83.00	747 00	
		1,297 00
Total revenue		$15,043 30

EXPERIMENTAL DEPARTMENT.

Expenditure.

Permanent improvements	$539 67
Assistant, specialist in plant breeding, stenographer, foreman, teamsters and laborers	14,941 65
Seeds, manure and special fertilizers	907 65
Furnishings, implements, repairs, blacksmithing, etc.	897 79
Printing, postage, stationery and contingencies	472 80
Purchase and feed of horses	496 00
Total expenditure	$18,255 56

DAIRY DEPARTMENT.

Expenditure.

Permanent improvements	$59 60
Wages, including foreman, cheesemaker, buttermaker, engineer, stenographer and bookkeeper, assistant and official tester of dairy cattle	3,315 50
Purchasing, hauling and manufacturing milk into butter and cheese	2,824 19
Furniture, furnishings, repairs, etc., laboratory expenses, gas, chemicals, etc., and contingencies	974 46
Fuel and light	1,100 00
Total expenditure	$8,273 75
Less revenue	3,182 56
Net expenditure	$5,091 19

Revenue.

Sale of Cheese, 8,470⅛ lbs. at from 7c. to 50c.	$1,920 77
Sale of Butter, 329 lbs. at from 15c. to 42c.	106 26
Sale of Cream, 1,874½ quarts at from 25c. to 32c.	468 89
Sale of Milk, 50 quarts at 4c.	2 00
Sale of Ice Cream, 13¼ gallons at 80c.	10 60
Sale of Skimmilk and Buttermilk, 160,343 lbs. at 25c. cwt.	400 87
Sundries	33 17
Rent	240 00
Total revenue	$3,182 56

DAIRY SCHOOL.

Expenditure.

Wages of instructors, engineer, janitor, stenographer and bookkeeper	$2,487 50
Cleaning, painting, repairs and contingencies	157 28
Dairy appliances, separators, vats, expenses, cheese and butter judges, inspecting factories, etc.	493 62
Advertising, printing, stationery, books, papers, etc.	114 33
Fuel and light	589 00
Purchase of milk for cheesemaking and cost of hauling milk and cream	3,521 93
Total Expenditure	$7,363 66
Less Revenue	1,904 07
Net Expenditure	$5,459 59

REVENUE.

Sale of Cheese, 5,471½ lbs. at from 15c. to 50c.	$1,349 76
Sale of Butter, 19 lbs. (scored) at 20c.	3 80
Sale of Cream, 657¼ quarts at 25c.	164 33
Sale of Ice Cream, 309 pints at from 15c. to 20c.	50 10
Sale of Milk, 25 quarts at 4c.	1 00
Sale of Skimmilk and Buttermilk, 86,200 lbs. at 25c. cwt.	215 50
Fees	86 00
Sundries	33 58
Total Revenue	$1,904 07

POULTRY DEPARTMENT.

EXPENDITURE.

Permanent improvements	$90 87
Wages of assistant, stenographer and temporary assistance	2,598 50
Purchase of stock	240 20
Furnishings and repairs	999 26
Fuel, light and contingencies	1,279 35
Experiments with incubators, fattening and feed	7,499 57
Feed of horse	83 00
Total Expenditure	$12,790 75
Less Revenue	8,544 35
Net Expenditure	$4,246 40

REVENUE.

Sale of live poultry, 524 birds for		$953 00
Sale of Dressed Poultry:—		
6,895¾ lbs. at from 15c. to 75c.	$1,248 85	
40 pairs broilers at from 1.00 to 1.50	55 63	
		1,304 48
Sale of Eggs for Hatching:—		
1,183½ settings at from 50c. to $3.00	$1,541 75	
13,916 eggs at from 5c. to 10c.	1,261 27	
		2,803 02
Sale of Eggs for Domestic Use:—		
8,804 1-6 dozen at from 20c. to 70c.		3,472 75
Sundries		11 10
Total revenue		$8,544 35

HORTICULTURE DEPARTMENT.

EXPENDITURE.

Permanent improvements	$482 75
Foreman, fireman, stenographer, teamsters and laborers	8,550 99
Manure, trees, plants, bulbs, implements, tools, furnishings, repairs and contingencies	3,198 75
Fuel and light	847 04
Feed of horses	498 00
Total expenditure	$13,577 53
Less revenue	1,229 62
Net expenditure	$12,347 91

REVENUE.

Sale of fruit and vegetables as per statement rendered monthly	$1,229 62

MECHANICAL DEPARTMENT.

EXPENDITURE.

Salary of foreman	$1,100 00
Tools, furnishings and repairs	233 46
Total expenditure	$1,333 46

APICULTURE DEPARTMENT.

EXPENDITURE.

Wages, equipment and maintenance	$1,649 30
Less revenue	275 25
Net expenditure	$1,374 05

REVENUE.

Sale of Honey:—		
1,775 lbs. at from 11½c. to 15c.	$226 25	
6 60 lbs. pails at $8.00	48 00	
		$274 25
Sale of beeswax, 2 lbs. at 50c.		1 00
Total revenue		$275 25

SOIL PHYSICS DEPARTMENT.

EXPENDITURE.

Services and expenses of temporary assistants in connection with Farm Drainage Demonstrations	$3,990 06

FORESTRY DEPARTMENT.

EXPENDITURE.

Contingencies	$980 43

SUMMARY.

	Expenditure.	Revenue.	Net Expenditure.
College	$176,167 39	$32,763 06	$143,404 33
Macdonald Institute and Hall	42,824 47	21,347 65	21,476 82
Farm	23,816 46	15,043 30	8,773 16
Experimental	18,255 56	.....	18,255 56
Dairy	8,273 75	3,182 56	5,091 19
Dairy School	7,363 66	1,904 07	5,459 59
Poultry	12,790 75	8,544 35	4,246 40
Horticulture	13,577 53	1,229 62	12,347 91
Mechanical	1,333 46	.....	1,333 46
Apiculture	1,649 30	275 25	1,374 05
Soil Physics	3,990 06	.....	3,990 06
Forestry	980 43	.....	980 43
	$311,022 82	$84,289 86	$226,732 96

S. SPRINGER,
Bursar and Superintendent.

Thirty-Ninth Annual Report

OF THE

Ontario Agricultural and Experimental Union

1917

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE)

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

CONTENTS

PAGE

Officers for 1918 4

Treasurer's Report: A. W. Mason 4

Secretary's Report: C. A. Zavitz 5

President's Address: Harry Sirett 6

Results of Co-operative Experiments with Farm Crops, Sources of Seed, and Increased Crop Production 9

Summary of Co-operative Experiments in Weed Eradication, 1912-1917: J. E. Howitt 10

Tuberculosis of Cattle and the Tuberculin Test: D. H. Jones 14

Northern Ontario as a Source of Seed Potatoes: Justus Miller 17

Co-operation in Wool Marketing: R. W. Wade 23

Results of Farm Management Survey in Caledon Township, Peel County: A. Leitch 25

Drainage and Tile Making: J. R. Spry 28

Ontario's Agriculture in the Present Crisis: G. C. Creelman 31

Address: Sir William Hearst 36

What the Motion Picture Bureau Hopes to do in Ontario Agriculture: S. C. Johnston 46

To His Honour Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I have the pleasure to present herewith for the consideration of your Honour the Report of the Agricultural and Experimental Union for 1917.

Respectfully submitted,

WILLIAM H. HEARST,

Minister of Agriculture.

Toronto, 1918.

Ontario Agricultural and Experimental Union

OFFICERS FOR 1918

President ..... Harvey B. Webster, R.R. No. 1, St. Mary's, Ont.
Vice-President ..... P. S. McLaren, R.R. No. 2. Perth, Ont.
Secretary ..... C. A. Zavitz. Agricultural College, Guelph.
Assistant Secretary ..... W. J. Squirrell. Agricultural College, Guelph.
Treasurer ..... A. W. Mason. Agricultural College, Guelph.
Directors ..... Dr. G. C. Creelman. Hon. Nelson Monteith, C. A. Keil, H. K. Revell, D. J. Matheson.
Auditors ..... R. R. Graham and S. H. Gandier.

COMMITTEES ON CO-OPERATIVE EXPERIMENTAL WORK.

Agriculture ..... C. A. Zavitz (Director), W. J. Squirrell, A. W. Mason, C. R. Klinck and A. E. Whiteside.
Agricultural Botany ..... J. E. Howitt (Director), T. G. Raynor, W. J. W. Lennox and R. Aiton.
Forestry ..... E. J. Zavitz (Director), A. H. Tomlinson and H. A. Dorrance.
Agricultural Chemistry ..... R. Harcourt (Director). J. W. Crow and A. L. Gibson.
Bacteriology ..... D. H. Jones (Director), H. Lund and H. King.

TREASURER'S REPORT, 1917

Receipts.		Expenditures.	
Balance from last year	$1,906 11	Agricultural experiments	$2,408 89
Government grant	2,750 00	Botanical experiments	37 50
Membership fees, 210 at 50c...	105 00	Expenses, annual meeting, 1917	173 95
Interest in bank	54 62	Meeting of executive	28 10
		Advertising	157 95
	$4,815 73	Total	$2,806 39
		Balance on hand	2,009 34
			$4,815 73

Ontario Agricultural and Experimental Union

ANNUAL MEETING

The thirty-ninth annual meeting of the Ontario Agricultural and Experimental Union was held at the Ontario Agricultural College, Guelph, on Tuesday and Wednesday, January 8th and 9th, 1918. A banquet was held on Tuesday night in the Dining Hall at the College when about five hundred officers, ex-students and students were seated at the tables. Dr. Creelman, President of the College, acted as Chairman, and Sir Wm. Hearst, Premier of Ontario and Minister of Agriculture for the Province, was the speaker of the evening. On Tuesday two sessions, and on Wednesday, three sessions of the Experimental Union meeting were held. All the sessions convened in Massey Building and some of them were crowded beyond the seating capacity of the hall. The reports and addresses which were presented, and the most important discussions which took place during the different sessions of the Experimental Union meeting, are embodied in this report and in Bulletin No. 260.

SECRETARY'S REPORT.

Dr. C. A. Zavitz, Professor of Field Husbandry, O.A.C., Guelph.

Thirty-nine years ago the Ontario Agricultural and Experimental Union was organized by the students, ex-students and officers of the Ontario Agricultural College. From that time to the present a meeting has been held each year for the discussion of the questions which come before the Association. Very shortly after the Union was established co-operative experiments were started in a small way. In 1886, however, the co-operative work was started under the present plan but with only twelve experimenters the first year. From that small beginning it has gradually developed until it has become one of the most influential forces in the organized agriculture of Ontario. Many of the farm crops which are now the most extensively grown throughout the Province were introduced to the public through the medium of the Experimental Union. The work has included not only those who have been directly associated with the Agricultural College, but thousands of other practical farmers located throughout the Province.

The increase in the number of experimenters in agriculture can be seen from the following figures which show the average yearly number actually engaged in the work in each of four eight-year periods:

Periods.	Years.	Average number of Experimenters per Annum.
1886–1893	8	315
1894–1901	8	2608
1902–1909	8	3882
1910–1917	8	4282

The total number of distinct tests made throughout the Province in agriculture alone during the past thirty-two years has been 88,604. The number of experimenters in the past year was 4,299. Even though labor is exceptionally scarce at the present time the number of experimenters in the past year was greater than that of the year previous. The farmers seem particularly anxious to secure pure seed of the best varieties of farm crops as foundation material and to keep in touch with the most improved methods of crop production.

Since our last meeting co-operative experiments have been conducted throughout Ontario with varieties of farm crops, quantities of seed per acre, mixed grains for grain production and for fodder, the application of commercial fertilizers, the eradication of weeds, the testing of cattle for tuberculosis, the re-foresting of waste places, etc.

The past three years have been abnormal for crop production in Ontario. There was an exceptionally large amount of rainfall in July and August, 1915, May and June, 1916, and June and July, 1917; in fact, in June and July of the past year there were no less than 13.94 inches of rain on the level, which is a larger amount than that of any two consecutive months in the last eighteen years according to the records made in the Department of Agricultural Physics at the College.

Within the past year three meetings of the Board of Control of the Experimental Union have taken place. Two of these were held in January and one was held in September.

As usual the Annual Report of the Experimental Union was published by the Ontario Department of Agriculture and distributed from Toronto to about 30,000 experimenters and other farmers.

At our last annual meeting practically all of the agricultural journals and the agricultural departments of the daily papers were represented by able reporters. We again wish to voice our appreciation for the hearty co-operation of the public press in bringing the results of the co-operative experiments so prominently before the agricultural readers.

The farmers of Ontario to the number of over four thousand who conducted co-operative experiments upon their own farms in the past year, not only did work of real service for themselves, but also furnished most valuable object lessons and practical results of special importance to the other farmers of the Province. We believe that the influence of this Association will be even greater in the future than it has been in the past. With the present urgent demands on the agriculture of the Province the Experimental Union will fill an important place. New lines of enquiry are sure to develop and will undoubtedly receive the close attention of the various committees appointed to carry forward the active work of the Association in the months and the years which are to follow.

PRESIDENT'S ADDRESS.

Harry Sirett, Brighton.

I am pleased to be able to welcome you to this the Thirty-ninth Annual Convention of the Ontario Experimental Union. I extend a particularly hearty welcome to those young farmers who have been winners in the various competitions held in the different counties throughout Ontario in the past year. Their presence here is of especial significance; they may be considered as representatives

of the younger generation on whom we are depending for the carrying on of advancements in agriculture in the future.

I welcome all of you more heartily because I fully realize the difficulty which each of you has encountered in leaving your farms to attend this convention.

We are now beginning a new year, the fourth that has seen the world struggling in remorseless warfare. The past twelve months have seen several developments of exceeding importance. The entry of the United States as an active participant in the war on the side of the allies has given us renewed hope, while the failure of Russia has been a keen disappointment.

Great Britain and France have said to us that our greatest help can be rendered by producing an abundance of foodstuffs, which are so urgently needed to feed not only their soldiers but also the civilian population. Our efforts to do our utmost in the production of foods are handicapped by the ever increasing difficulty in obtaining help on the farms. There has been an increasing demand in almost every line of production. The manufacture of munitions, the increased trade in all those commodities required for the equipping and maintaining of a vast army has taken men from the fields whose services could ill be spared, but we recognize the need of these industries and have endeavored to spare the men to carry them on. Unfortunately, these necessary industries are not alone in feeling an impetus, and many industries which are engaged in the production of what in no sense can be considered as necessities are competing with other manufacturers and with the farmer for labor. Unfortunately, too, many of these industries have been able to offer prices for their labor which has made it almost impossible for the farmer to compete against them. Laborers who previously have been employed on farms cannot be censured for leaving the rural districts to work in towns and cities when the reward received there is greater than is to be obtained at their previous occupations.

When the number of men who would volunteer to fight in the trenches became insufficient the Government of Canada passed the Military Service Act, and at the polls in the recent election the people of Canada have voiced their approval of such a measure. If it be true that there exists a crisis in Europe in connection with the food supply, and there is not a sufficient number of men who will voluntarily accept the reward which the production of foods offers, it is as necessary to conscript men to work in the fields as it was that men should be conscripted to fight in the trenches.

It may not be necessary to resort to a law having power to go into factories and take the men out to the fields. It would be equally effective if the manufacturers of those things which are non-essential were placed under a restriction which would have the result of preventing them from competing with essential industries for what labor is available. If farmers are to be urged to produce "Even at a loss," then manufacturers must be prepared to restrict their production "Even at a loss." Now might be a most opportune time for the manufacturer to invade new fields and establish himself in new territory; territory which the European manufacturer has hitherto controlled and from which he has been forced to withdraw in order that his employee might be liberated to bear arms or to engage in other industries of greater importance.

It cannot be tolerated that labor needed in the production of those things which are most essential at the present moment and of paramount importance to the successful carrying on of the war, be diverted, in order that some might take advantage of an opportunity to place their industries in a better position to be maintained after the war is over. By so doing we are jeopardizing our chances of

bringing the war to an early and most successful conclusion. It may be advisable to place all industrial activity under the control of a commission whose duty it would be to say in what industry labor may be employed. That would mean that every would-be employer of labor would have to obtain a license which would give authority to engage the number of employees which the commission considered was justified by the absolute needs of the country at the present time.

The manufacture of automobiles and automobile accessories to the extent that these are used for unnecessary recreation is not an aid in the present crisis; and the manufacturer of such could be curtailed without hardship to anyone compared with the hardship endured by those who might be unable to secure sufficient food to sustain their bodies. The manufacture of such commodities as confectionery, ornaments for personal adornment or other uses, clothing which is demanded only to enable the wearer to conform to the dictates of fashion and not necessary to bodily comfort, and an innumerable list of such things which cannot be classed as necessities, must be curtailed, that labor be liberated for the production of more essential things. Such industries must halt: not that those more essential industries should yield greater profits to their owners, but that by increasing and making easier the production of necessities, the needs of those who are looking to us to assist in protecting them from absolute suffering may be more nearly supplied. More than that, by liberating more labor for the production of necessities the price of those commodities would tend toward lower levels. The cost of living in this country would be checked in its upward flight and the cost of production would show a corresponding declination. In the past three years the prices of necessities have been constantly advanced because of the ever increasing price of labor, due, in part, to the competition of non-essential industries which have been able to compete with higher and ever higher prices for that labor.

The assistance offered by business men and other urban residents such as was made available last summer, while a help, offers no dependable solution to the problem. The amount of labor available cannot be increased; it remains, then, for us to see that what is available be employed in industries which are most essential.

H. B. Webster: To those of us who have known the President, this comprehensive address he has given and to which we have listened with such interest, is just what we would expect of him. We know the keynote of his address is a call for increased production, and what could be more important at the present time than increasing the agricultural production. It is necessary to have surplus agricultural production at the present time to feed the allies. In this way we may help to pay our indebtedness. There are several phases of it and we must not overlook any important ones.

We are all familiar with the educational work that is being carried on and how it is affecting the Empire at the present time. I think I can say this, that notwithstanding all that is being done, the problem is not altogether an educational one. Those on the land want to collect all the information that is available and are always anxious and ready to receive any new ideas that will help them in their work. I think just now the economic conditions are the ones demanding greater attention in the cause of increased production.

The President's address has dealt largely with the question of labor, how the available labor in the country may be used in the best way, conscripting it, as it were, so that it may be used in the most important industries. It appears to me that one of the greatest reasons why we cannot hope for larger increased production is because of the feeling of unrest among farmers to-day. The farmers are

beginning to realize that for years their help has been leaving them and drifting towards the cities, because they receive employment in industries whose owners are able to pay more wages because of protection, for which the farmer, to a great extent, pays. I believe the farmers, those at least whom I have questioned, feel the economic disadvantage in this respect and have not responded to the call for greater production as they otherwise would.

Regarding the production of oleo-margarine, I think after the war we will find that artificial butter will come more into competition with dairy products than at present, and will cause a legislative war between the oleo-margarine and the dairy interests. In view of the uncertainties of the future, those who are engaged in the dairy industry do not appear disposed to increase their business to any great extent.

What is wanted in agriculture to-day is co-operative organization, greater development of farm business and more independent thought. I think it is up to us, if not as a Union, as individuals, as students and ex-students of this College, to try and help the co-operative movement in every way and give it our highest sympathy and support and further the economic interests of our calling. Thus the farming industry may in the future be classed as one of the most important and one that will demand recognition in legislative halls. Let us try to give this movement wise direction as far as we have opportunity efficiently to make it authoritative. If we do, we will be doing our best to further the call for increased production.

RESULTS OF CO-OPERATIVE EXPERIMENTS WITH FARM CROPS, SOURCES OF SEED, AND INCREASED CROP PRODUCTION.

An advance report of the Experimental Union was issued in the form of a bulletin in March so that the farmers might make immediate use of certain material given at the annual meeting which had an important bearing on production for the present year.

The bulletin includes the following:

Results of Co-operative Experiments in Agriculture:
DR. C. A. ZAVITZ.
Sources of Farm Seed Supply for the Province of Ontario:
Experimental Union: PROF. W. J. SQUIRRELL.
Ontario Seed Trade: WALTER STEELE.
District Representatives: R. S. DUNCAN.
Field Crop Competitions: J. LOCKIE WILSON.
Canadian Seed Growers' Association: L. H. NEWMAN.
The Western Ontario Seed Growers' Association: A. McKENNEY.
Ontario Corn Growers' Association: P. L. FANCHER.
Dominion Seed Branch: W. J. W. LENNOX.
Root Seed Growing in Canada:
DR. M. O. MALTE.
HENRY STOKES.
DR. C. A. ZAVITZ.
Practical Suggestions in the Production of Food Materials for the Coming Year:
Wheat and Beans: DR. C. A. ZAVITZ.
Beef and Bacon: PROF. G. E. DAY.
Butter and Cheese: PROF. H. H. DEAN.
Poultry and Eggs: PROF. W. R. GRAHAM.
Fruit and Honey: P. W. HODGETTS.

Any person who has not received this information could secure a copy of Bulletin No. 260 by writing to the Department of Agriculture, Parliament Buildings, Toronto, Ontario.

SUMMARY OF CO-OPERATIVE EXPERIMENTS IN WEED ERADICATION, 1912-1917.

Prof. J. E. Howitt, O.A.C., Guelph.

This experimental work was commenced in 1912 and has been conducted now for six successive years. The object of this work is to have, carried on by men on their own farms, experiments in the eradication of weeds, the results of which will furnish data from which definite information may be obtained regarding the best methods of controlling the various troublesome weeds of the Province. Before the results of these experiments began to accumulate there was little or no definite knowledge concerning the eradication of weeds.

When this work was started it was thought wise to confine our attention at first to four of our common troublesome weeds, and as the experiments progressed to add more bad weeds from year to year until exact information had been obtained about the eradication of most of the worst weeds of Ontario. Six experiments in all were outlined for the first year (1912), namely, "The Use of Rape in the Destruction of Perennial Sow Thistle;" "A System of Intensive Cropping for the Eradication of Perennial Sow Thistle;" "The Use of Rape in the Destruction of Twitch Grass;" "A Method of Cultivation and Cropping for the Extermination of Twitch Grass;" "A Method of Cultivation and Cropping for the Eradication of Bladder Campion;" "Spraying with Iron Sulphate to Destroy Mustard in Cereal Crops." In 1917 ten experiments in all were conducted, namely, "The Use of Rape in the Destruction of Perennial Sow Thistle;" "A System of Intensive Cropping and Cultivating, using Winter Rye Followed by Turnips, Rape or Buckwheat, for Eradicating Perennial Sow Thistle;" "The Use of Rape in the Destruction of Twitch Grass;" "A Method of Cultivation for the Destruction of Twitch Grass;" "A Method of Cultivation for the Eradication of Bladder Campion or Cow Bell;" "Spraying with Iron Sulphate to Destroy Mustard in Cereal Crops;" "A Method of Cultivation for the Destruction of Ox-eye Daisy;" "A Method of Cultivation and Cropping for the Suppression of Field Bindweed or Wild Morning Glory;" "A Method of Cultivation and Cropping for the Eradication of Wild Oats;" "A Method of Cultivation for the Destruction of Chess."

Each spring leaflets are sent out to numerous farmers of the Province, inviting all who have any of the troublesome weeds in our list of experiments to co-operate with us in this work and try the experiments outlined for the particular weed which is giving them trouble. Application forms for the experiments accompany the leaflets. To those who fill in these and return them, detailed directions for the carrying out of the experiments selected are sent, and in the fall they are supplied with blank forms on which to report the results of their experiment.

In the past six years (1912-17) over sixty farmers have co-operated in this work. Experiments No. 1 "The Use of Rape in the Destruction of Perennial Sow Thistle," No. 3, "The Use of Rape in the Destruction of Twitch Grass." No. 5, "Method of Cultivation for the Eradication of Bladder Campion or Cow Bell," and No. 6, "Spraying with Iron Sulphate to Destroy Mustard in Cereal Crops," have been conducted for six successive years, and the results may be briefly summarized as follows:

Experiment No. 1. Total number of experimenters 11. Reporting complete success 8. Reporting partial success 2. Reporting failure 1.

Kinds of soil on which this experiment was conducted: Black muck, sandy loam, light clay loam, clay loam and gravel to clay.

Experiment No. 3. Total number of experimenters 11. Reporting complete success 8. Reporting partial success 3.

Kinds of soil on which experiment was tried: Sandy loam, clay loam, sandy and gravelly and light loam.

Experiment No. 5. Total number of experimenters 7. Reporting complete success 4. Reporting partial success 3.

Experiment No. 6. Total number of experimenters 22. Reporting complete success 17. Reporting partial success 2. Reporting failure 3.

Crops in which mustard was sprayed: Oats, barley and wheat.

The reports show that there is no serious injury to standing crops or fresh seedings of clover from spraying with a twenty per cent. solution of iron sulphate.

Average cost per acre for material $1.54. This is nearly doubled at the present time, the price of iron sulphate having increased from fifty to one hundred per cent. due to the war.

The results of these six years' experiments show clearly that the following methods can be successfully employed on the farms of Ontario for the control of Perennial Sow Thistle, Twitch Grass, Bladder Campion and Wild Mustard.

The Use of Rape in the Destruction of Perennial Sow Thistle and Twitch Grass. Cultivate the field until about the middle of June, running over it frequently with the cultivator so as to keep the tops down and weaken the "roots." Then apply manure at the rate of about 20 tons per acre (12 good loads). Cultivate the manure in thoroughly, and with a double mould board plow slightly ridge up the land, making the ridges about 26 inches apart. On the ridges sow pasture rape at the rate of 1½ lbs. per acre. It is important that the right amount of rape should be sown, for if too little is sown the stand will not be thick enough to smother the weeds, and if on the other hand too much is sown the plants will be too crowded and not grow vigourously enough to keep ahead of the thistle or twitch grass. Sow the rape when the land is sufficiently moist to insure quick germination of the seed. If the rape is slow in starting the sow thistle or twitch grass may get a start in the row and thus necessitate hand cultivation there. Cultivate the rape every week or ten days until it occupies all the ground and makes further cultivation impossible. If when the rape is cut or pastured any sow thistle or twitch grass remains, the field should be ridged up the last thing in the fall and put in with a hoed crop the following year. This should not be necessary if a good stand of rape is secured.

A Method of Cultivation for the Eradication of Bladder Campion or Cow Bell. Badly infested fields should be plowed deeply and then thoroughly cultivated and cross-cultivated with a broad-shared cultivator in order to break up and weaken the underground root stocks. This cultivation should be given frequently enough to prevent the plants making any growth above ground until it is time to put in a hoed crop, which must be kept thoroughly clean in order to be effective. A well cared for crop of corn has been found to give excellent results. Special attention must be given to hoeing out any patches of bladder campion which may appear in the corn crop, and which are not destroyed by cultivation. If in the fall there is any bladder campion in the field, it will be necessary to plow fairly deeply and cultivate thoroughly and the following spring repeat the frequent cultivation until it is time to put in a hoed crop. This second hoed crop should not be necessary under ordinary conditions. One spring's thorough cultivation, followed by a well cared for hoed crop should destroy practically all the bladder campion.

Spraying With Iron Sulphate to Destroy Mustard in Cereal Crops.

Iron sulphate or copper can be successfully used to destroy mustard in standing grain without injury to the crop.

A 20 per cent. solution should be applied. This can be prepared by dissolving 80 lbs. of iron sulphate in 40 gallons of water. Iron sulphate is dissolved quite readily in cold water. The solution should be strained through a cheesecloth, as it is put into the spray pump tank. This will remove dirt and small particles that are apt to clog the nozzles.

Apply on a calm, clear day just as soon as the first few plants in the fields show flowers. *It is very important to spray early.* If a heavy rain comes within twenty-four hours after the solution is applied, it will be necessary to spray again.

An ordinary hand pump barrel sprayer, such as is employed to spray fruit trees may be used, or a potato sprayer can be rigged up to do the work. Many of the up-to-date potato sprayers have a special broadcast attachment for spraying weeds. These are excellent for large areas, as they cover a wide strip at each round. Care must be taken to see that every mustard plant is covered with the solution in the form of a fine spray.

Iron sulphate may be obtained at any hardware store, or from some wholesale chemical firm, who can supply it much cheaper in large quantities than it can be purchased at local hardware stores.

These experiments will be conducted this year (1918). The weeds to be experimented with are Perennial Sow Thistle, Twitch Grass, Bladder Campion or Cow Bell, Wild Mustard, Ox-eye Daisy, Field Bindweed, Wild Oats and Chess. All who have any of these weeds on their farms are invited to co-operate in this work and by so doing profit by ridding the field of the weed experimented with and demonstrating to their own satisfaction the effectiveness of the method tried, and at the same time furnishing practical information to others.

Mr. Lewis: I notice one experimenter who sowed rape broadcast was only partially successful in killing Perennial Sow Thistle. We used to grow rape more extensively than we do now.

Dr. Zavitz: We had a piece of low land that was completely covered with Twitch Grass and wondered what we could do to get rid of it without summer fallowing. We used the method of sowing rape for the killing of the Twitch Grass and found it very successful indeed.

A Member: How many years does it take to kill out Bladder Campion?

Prof. Howitt: Some report it killed out in one year.

A Member: This may kill out the plant in bloom but what about the seeds?

Prof. Howitt: Rotation of crops would come in there. The seed itself remains in the soil. You would have to establish some method of cropping which would include full cultivation to get the seeds to germinate and a hoed crop to clean out the mature plants.

A Member: In my experience I have known a field to be at least half Bladder Campion. What kind of plow do you use to cut the roots?

Prof. Howitt: You can't cut them all but cutting the tops will gradually weaken the roots.

Mr. Keil: In regard to the mustard plant it gets very yellow at blooming time. I follow a system used by some of the best farmers which consists of putting the land in corn and keeping it well cultivated. The following spring sow grain on land which has not been ploughed, only cultivated. Where this treatment has been used I have seen instances where there would be scarcely a plant of mustard left in the spring.

PROF. HOWITT: I have seen that system worked out. In time the farmer is almost completely rid of the mustard by not plowing after corn because the seeds are not brought to the surface at that time.

A MEMBER: Have you carried on any experiments with Bindweed?

PROF. HOWITT: We started experiments last year but as the treatment takes two years it will be another year before we have any results. It is a most difficult weed to deal with. It requires drastic methods and more labor than we can readily get at the present time.

A MEMBER: Will you outline the experiment?

PROF. HOWITT: Get on the field just as soon as the land is dry enough to permit of cultivation. Do not give the Bindweed a chance to make any early spring growth. If the field is in sod, plow shallow. If the land was plowed last fall it will not be necessary to plow again this spring. Cultivate every week or ten days with a cultivator with broad points that will cut all the plants off an inch or two below the ground without bringing the creeping rootstocks to the surface. Continue cultivation until the 24th of May or 1st of June. Then plant corn in hills forty-two inches apart each way, so that it can be cultivated both ways. As soon as the corn is up cultivate it with a corn cultivator at least every two weeks, oftener if possible. Just as soon as the corn is cut plow out the stalks and cultivate every ten days or two weeks with the broad-shared cultivator. It is very important to cultivate again as soon after the corn is cut as possible, so that the Bindweed will not have a chance to get started into growth.

Last thing in the fall rib up the land into drills and allow to stand over winter. The frost in all probability will render material assistance in the eradication. The following spring start cultivation with the broad-shared cultivator as soon as you can get on the land. Repeat frequently enough to prevent the Bindweed making any growth above the ground, until the first or middle of June. Then sow pasture rape (Dwarf Essex variety) or turnips, in drills 26 to 30 inches apart, at the rate of about 1½ pounds per acre. As soon as the crop is up, cultivate every week or ten days until it occupies all the ground and makes further cultivation impossible. If the Bindweed should get started in the rows, hoe it out as completely as possible. This, however, should not be necessary if the previous cultivation has been frequent and thorough.

A MEMBER: We undertook to get rid of it in one year. The field was cultivated once every five days throughout the season, no crop being grown. The next year we put the field into regular crop and found we had it about as bad as ever.

A MEMBER: I would like to ask if turnips sown under certain conditions most favourable for turnips, would get ahead of the Sow Thistle?

PROF. HOWITT: My experience has been that it is not as suitable a crop for the purpose as rape.

A MEMBER: On land where turnips grew well, I have seen, in a favorable season, Bindweed cleaned out pretty thoroughly.

DR. ZAVITZ: It would be well to get a turnip with a large top. There is a great difference in the different varieties in this respect.

MR. EVANS: I would sooner try to kill Twitch Grass with potatoes than turnips.

A MEMBER: How about killing Twitch Grass in a maturing peach orchard where you can't cultivate?

PROF. HOWITT: It is doubtful whether it would pay to attempt it. It would be almost impossible to kill it unless you cultivated the whole place. The

best method would be, I should imagine, to let the Twitch Grass grow until the heads were forming and plow them in at that time as thoroughly as you could under the circumstances. Afterwards harrow and cultivate with a spring tooth cultivator and get the roots to the surface of the ground and rake them up. Then sow buckwheat or rape in between the rows.

A MEMBER: I might say I have had Bindweed in an experimental plot. I was able to get rid of it, however, by using salt. Keep out the little patches and you will not have a serious problem on your hands.

H. SIRETT: This discussion on the control of the weeds is of interest to every farmer. In the County of Northumberland the orchard is often neglected and it is a problem to get rid of the Twitch Grass. I feel that while it will take a great deal of persistent work yet diligence will accomplish results. There is this redeeming feature, that the fertility added to the soil from the decay of the Twitch Grass is worth to the land the labour it takes to destroy it. I have found that the most satisfactory way is to cultivate with a stiff tooth cultivator instead of a spring tooth cultivator.

TUBERCULOSIS OF CATTLE AND THE TUBERCULIN TEST.

PROF. D. H. JONES, O.A.C., GUELPH.

We occasionally get requests for information and help in connection with the tuberculin test of cattle for tuberculosis. This has led us to think that possibly if the question of tuberculin testing of cattle were brought a little more intimately to the notice of our farmers in general through the agency of the Experimental Union, the testing of cattle for tuberculosis would become more common, and so a step further would be made towards the eradication of the disease from the live stock of the Province. Accordingly, we propose instituting, through the Experimental Union, a propaganda for the spread of information regarding the nature and value of the test.

NATURE AND PURPOSE OF THE TUBERCULIN TEST.

The tuberculin test of cattle is for the purpose of determining whether or not an animal is suffering from tuberculosis. The test, when properly employed, while not absolutely infallible, has shown itself to be reliable in ninety-eight per cent. of cases in many thousands of tests in Europe, the United States, Canada and other countries. It is the only reliable means of determining whether or not an animal is tubercular unless the animal is very far gone with the disease or has only very recently become infected.

Tuberculin is a brown-colored liquid obtained by growing *Bacillus tuberculosis* in specially prepared beef broth. After the bacilli have grown in the broth for a sufficient length of time, they are killed by the application of heat. The broth is then filtered and condensed and a preservative is added. The product so obtained is tuberculin. This tuberculin has to be tested and established at a proper strength before being used.

As a result of the growth of the bacilli in the broth, there is produced in it a substance to which tubercular cattle, unless they are very far gone with the disease or only just recently infected, are very sensitive, whereas cattle that are

not tubercular are not sensitive. This sensitiveness of tubercular cattle is shown by a temporary rise of their body temperature following a subcutaneous injection of a small quantity of the tuberculin.

Application of the Tuberculin Test.

In order to tell whether or not the temperature of an animal rises following an injection of tuberculin it is necessary first of all to find out what is the normal temperature of the animal. In doing this it is necessary to have the cattle quiet in their stalls. If the cattle are feverish from any cause or have just calved or are just above to calve, the test should not be made.

The temperature is taken by inserting a clinical thermometer in the anus or vulva, allowing it to stay there for two or three minutes, and then taking the reading. At least three temperatures of each cow should be taken at intervals of two hours before injecting the tuberculin.

The tuberculin is then injected beneath the loose skin near the shoulder by means of a hypodermic syringe.

After about eight or nine hours from the time of injection it is necessary to begin taking temperatures again. These should be taken about six times at intervals of two hours. If the animal is tubercular there will be a gradual rise of temperature of from two to five degrees above the highest temperature reached before the tuberculin was injected, then the temperature will gradually fall again to normal. If the animal is not tubercular the temperatures recorded after the injection of the tuberculin will be approximately the same as those recorded before the injection. The tuberculin has no effect either good or bad on cattle that are not tubercular.

Reasons for Making the Test.

Tuberculosis is a disease that is widely spread in all civilized countries. It is common in cattle, swine, birds and human beings. The disease is usually slow in developing so that an animal may be infected for months or even years before showing any marked symptoms of the disease.

There are three recognized strains of tubercle bacilli; the *Bovine*, affecting most readily cattle and swine; the *Avian* affecting most readily birds, particularly domestic poultry, and the *Human*, affecting most readily human beings.

It was thought at one time that the bovine strain of the tubercle bacillus could not establish tuberculosis in human beings, and that the human strain could not affect cattle and that the avian strain could not affect either cattle or man. It has since been demonstrated, however, that the bovine strain *can* and *does* readily establish the disease in human beings, particularly in the case of infants whose diet, of course, is mainly milk. It has been proven that a considerable percentage of tuberculosis in children is due to infection from milk that has been obtained from tubercular cattle. One reason, then, for having cattle tested for tuberculosis is that we may prevent infants from contracting the dread disease that causes so much misery in our midst. Any town or city that wishes to control its milk supply so far as tuberculosis is concerned, can demand that those who supply it with milk shall have their cattle tested under Government supervision and all tubercular animals excluded from the herds from which the milk is obtained. Any town or city wishing so to do should state its case to the Veterinary Director-General at Ottawa and he will take steps to see that the request is attended to.

Another reason why farmers should have their cattle tested is the financial loss which they suffer by having tubercular animals in their herds. As the disease is at first slow in development and does not induce sudden death, like anthrax, black leg, or hog cholera, the farmer does not realize the loss that he endures by having tuberculosis in his herd until one or more animals develop the disease in an advanced degree and die or are slaughtered, when they are at once seen to be rotten with the disease. Such animals will have had the disease a long time without it being suspected and will have been giving off in their milk, saliva and droppings, large numbers of tuberculosis bacilli. In this way the bacilli are spread around, the food, water and atmosphere in the stable get contaminated with them and other members of the herd contract the disease from these contaminated materials.

When the tubercle bacilli get lodged in the animal's body from contaminated food, water or atmosphere, they begin to multiply and produce a poison which acts locally, killing the tissue where they are located and causing the development of tubercles. These tubercles may develop in any part of the body where the bacilli get located. When they develop in the lungs, the lungs are gradually destroyed, the animal gets a chronic cough and large numbers of the bacilli are coughed up into the mouth and are either drooled out with saliva or are swallowed and then either passed out with the droppings or they set up further infection in the intestines. When there is tuberculosis of the intestines the animal is likely to be affected with chronic scouring and so large numbers of the bacilli are thus thrown off. When tuberculosis gets established in the udder the udder will become lumpy and large numbers of tubercle bacilli will be given off in the milk. When the disease has developed to such an extent in the animal's body as to show any of the foregoing conditions, other parts of the body, such as the heart, liver, stomach, lymph glands, uterus and peritoneum are most likely affected, and by this time the animal is very much of a losing concern, either as a producer of milk or beef. But the loss to the farmer is not necessarily confined to this animal. For, long before the disease has reached this extent the animal has been a source of infection for the rest of the herd and in all probability a number of the herd have contracted the disease from it. The life of such cattle will be materially shortened, their milk flow will be reduced or their beef production lowered and the disease will spread from them to others in the herd before it is realized that they are affected.

The tuberculin test will indicate whether or not an animal is tubercular long before any clinical symptoms are visible, thus enabling one to deal with such an animal before it becomes a dangerous spreader of the disease.

When an animal is shown to be tubercular it should not be allowed to mix with the rest of the herd. If the disease is in an advanced stage the animal should be slaughtered. The internal organs of such an animal may be badly tubercular, but the muscle meat scarcely affected so that the value of the animal so far as butcher meat is concerned, could be recovered. If the disease is not in an advanced stage the animal should be separated from the rest of the herd and kept separate. Its milk should be pasteurized before using. After the cow calves, the calf should be at once removed and fed milk from healthy cows, or its own mother's milk after pasteurization. Thus removing the tubercular cow from the rest of the herd diminishes the danger of the disease spreading amongst the herd, and by removing the young calf from the tubercular mother and feeding it milk in which there are no living tubercle bacilli, the calf is prevented from gaining the disease unless of course it should gain it from some other source.

It has been demonstrated again and again to be possible thus to gradually eradicate tuberculosis from a herd. Of course it means a little more work and the exercise of care, which may seem to be too much bother to some farmers. But we cannot get much good in this world without a reasonable amount of effort being put forth and to have a herd of cattle which are known to be free from tuberculosis is most certainly worth the trouble to detect and remove the disease.

When cattle are purchased to add to the herd it should be only when subject to the tuberculin test, as cattle may have every visible indication of good health and yet be tubercular, the disease not yet having developed to an advanced degree.

It is therefore strongly recommended that farmers:

1st. Have their herds tested for tuberculosis with the tuberculin test.

2nd. That they slaughter the animals that have the disease in an advanced degree.

3rd. That they separate the cattle that react to the test from those which do not react.

4th. That they remove the calves from tubercular mothers as soon as dropped and feed them on milk from healthy cows or on their mother's milk after it has been properly pasteurized, i.e., after it has been heated to 145 deg. F. for half an hour.

5th. That they apply the tuberculin test to every new purchase of cattle that are to be placed in the clean herd.

6th. That the herd be tested with tuberculin annually.

The above recommendations are practically the same as those that were made by the International Commission for the Control of Bovine Tuberculosis.

Obtaining Tuberculin for the Test.

The manufacture and supply of tuberculin is kept under the Dominion Government control. It is required that a veterinarian be employed by the farmer to make the test. The tuberculin can be obtained free from the Veterinary Director-General at Ottawa on sending the name of the veterinary surgeon to be employed to make the test. The number of cattle to be tested should be stated when application is made for tuberculin.

NORTHERN ONTARIO AS A SOURCE OF SEED POTATOES.

Justus Miller, Toronto.

The superiority of Northern Ontario for the production of seed potatoes is due, we believe, to three factors. The first of these is found in the peculiarly favorable climate that prevails in the north. The natural habitat of the potato was found in the high plateaus of Colorado and Peru. The characteristics of the climate prevailing in these districts are: long growing days of sunshine, cool nights, abundant moisture and heavy dews, without periods of drought. Under such conditions the potato has been proven to thrive best. In Northern Ontario these conditions are prevalent. Severe heat and drought which arrest the growth and lower the vitality of potatoes are very uncommon, while abundant rains and heavy dews are the rule.

Physiological diseases which are becoming all too common in Old Ontario are hardly known in the north. Leaf roll, the worst of these diseases, was not

found in a single case during a lengthy investigation conducted in Northern Ontario in the summer of 1917. Curly dwarf was not noted either. Mosaic, a bad disease but less serious than leaf roll, was encountered to a small extent, but in a very few cases was the percentage of diseased plants large.

These diseases are all hereditary. Their action is to stunt the growth of the plants and reduce the size and number of the tubers. If tubers from plants affected with this disease are planted the disease will exist in the resultant plants in a still more aggravated form until in the third or fourth generation the plants will be very small and stunted and the crop of marketable potatoes produced by them almost nil.

From experiments conducted by P. A. Murphy, who has charge of potato disease investigation work in Canada, it would appear that these diseases are also communicable. Just how they are communicated is not known as no organism has been found which causes them. It is thought, however, that enzymes of the diseased plants contaminate healthy plants immediately adjacent to them. It is generally believed that the diseases are produced by prolonged drought or other unfavorable conditions which produce the degeneracy noted. Whatever the cause, however, it has been abundantly proven that these diseases are about the most serious obstacle which the potato grower has to face. As an example, a number of experiments conducted in Nova Scotia may be cited. Several lots of potatoes were planted in this experiment, some from healthy and some from diseased stock. Where 100 per cent. leaf roll was present the plots yielded at the rate per acre of from 36 to 46 bushels of marketable potatoes. Where no leaf roll was present, from 226 to 240 bushels of marketable potatoes were secured per acre. Intermediate percentages of leaf roll give yields varying between these two extremes, very nearly in direct proportion to the amount of leaf roll present. As a general result of these experiments it may be taken that for each per cent. of leaf roll present in the crop, the yield of marketable potatoes will be reduced 1⅔ bushels per acre.

It is believed that these diseases can be communicated to healthy plants and they are certainly inheritable. The best authorities both in Canada and in the United States agree that it is practically impossible to control these diseases by selection in a district where they are well established. The only safe remedy is to secure seed from a district where they have not become established. This district of supply for the potato growers in Old Ontario would logically seem to be Northern Ontario. As has already been explained, physiological diseases have not yet become established to any extent in the north, and owing to climatic conditions which do not favor the development of such diseases it is doubtful if they ever will become a menace to the potato industry of the north.

The third factor, which makes Northern Ontario particularly adapted to the production of high class quality of seed potatoes, is the immaturity of the seed which is found in those districts. That immaturity increases yields can hardly be doubted in view of scientific experiment and practical experience which would seem to prove the point. On the Central Experimental Farm at Ottawa, the factor of immaturity was emphasized in a particularly forcible way last summer. In 1916, Professor W. T. Macoun, Dominion Horticulturist, conducted an experiment with potatoes on three different types of soil—sand, clay and muck. The potatoes planted on the muck happened to be near the boundary of the farm and Professor Macoun discovered, early in the fall, that workmen were stealing these potatoes. To preserve uniformity in his experiment, he had the three lots dug in August. This immature seed planted in 1917 gave astonishing results,

yielding very much more than mature seed of the same variety and planted on the same soil.

At a conference of potato experts and practical growers held in Toronto in October, 1917, this question was very thoroughly discussed and it was generally agreed by all present that immaturity of seed very greatly increased yields. At that meeting, Mr. Walter Cook, of Cataraqui, explained his methods. He plowed his sod in July, after a crop of hay had been removed and planted enough potatoes to provide his seed stock for the coming year. By the time frost had cut down the tops the immature seed had developed sufficiently to be used next spring. By these methods he claims to have increased his yields in the neighborhood of 100 bushels per acre.

In Northern Ontario, owing to climatic conditions, the seed while growing to large size, very seldom matures. This factor of immaturity is thought to be one very important reason why northern seed, when planted in Old Ontario, gives such outstanding results. In a series of experiments conducted for five years, Dr. C. A. Zavitz, of the Ontario Agricultural College, has proven the relative merits of seed potatoes grown in Northern Ontario, New Brunswick and Old Ontario. The seed from these different sources was planted side by side on exactly the same kind of soil. The yields last year were 350 bushels, 318 bushels and 220 bushels respectively, and these results may be taken as representative of the five years' operation.

Practical growers have secured as satisfactory results. The manager of the Sarnia Vegetable Growers' Association, in his annual report for 1917, advises all the members to plant seed potatoes grown in Northern Ontario. He explains in this report, that such seed planted by members of his Association in the past has increased their yields at least 20 per cent. G. A. Williams, R. R. No. 5, Peterboro, Ontario, has secured an increase of 137 bushels per acre by planting northern grown seed over the yield obtained from home-grown seed. G. Bridger & Sons, R. R. No. 1, Sarnia, W. Jeak, Peterboro, Guthrie Bros., R. R. No. 3, Sarnia, and Henry Broughton, Sarnia, have all written to the effect that by the planting of northern grown seed potatoes they have increased their yields from 20 to 25 per cent. This practical experience, in conjunction with the scientific experiments already explained, show conclusively that northern grown seed potatoes give far better results in Old Ontario than home-grown seed and that they should be more generally planted in Old Ontario. In consideration of these facts an investigation was undertaken in the late summer of 1917 regarding the advantages of encouraging the potato industry in Northern Ontario. Dr. Zavitz, W. A. McCubbin, the chief Dominion Pathologist in Ontario, and myself visited every district in Northern Ontario where they grow potatoes. Our method was to visit the best potato growers, examine the crops generally and make a minute inspection of several hundreds of hills in each field. From this inspection we calculated the percentage of disease, etc. We visited eighty-seven growers in the north.

After we finished the northern trip we decided we had not all the information we wanted. We had knowledge of the conditions in New Ontario regarding the potato industry, but we did not know accurately the conditions in Old Ontario, particularly regarding conditions of physiological disease. So immediately after, we visited three districts in Old Ontario which specialized in potato growing—Caradoc Township in the County of Middlesex, Erin Township in the County of Wellington, and Gloucester Township in the County of Carleton.

In New Ontario we found about six per cent. of serious diseases and practically

no physiological disease at all. In each of the three districts in Old Ontario we found a very great amount of all kinds of potato diseases and an alarming amount of physiological disease in each case. Altogether we discovered an average of 23 per cent. of serious diseases in these three older counties. Moreover, the northern crops were more vigorous and promised far larger yields. While large districts in the north are not yet cleared, I believe it to be one of the coming great agricultural districts of America. Thunder Bay district alone has 40,000 acres of the very best potato soil, a considerable part of which is already under cultivation. Many thousands of acres of good soil of a heavier nature will be available for potato growing in the future. As an example of how the industry is developing, it may not be amiss to state that four years ago the Cities of Fort William and Port Arthur, in the Thunder Bay district, were importing potatoes, whereas the district immediately adjacent now supplies these cities and also transports to Old Ontario in the neighborhood of one hundred and forty carloads a year.

If growers in Old Ontario become once convinced of the advisability of planting northern grown seed and are willing, by their orders, to encourage seed production in the north, we shall have very little difficulty in organizing New Ontario to supply all that the older portions of the Province will require.

In order to encourage the development of a strong potato industry in Northern Ontario and to encourage also the planting of northern grown seed by growers in Old Ontario, the Ontario Department of Agriculture has made certain definite plans to be of assistance this spring. All seed potatoes to be used for departmental purposes are being purchased either from Northern Ontario or from New Brunswick—a total in the neighborhood of 1,700 bags. We prefer seed grown in Northern Ontario but at the present time it is not possible to secure the quantity we wish, of guaranteed quality. With this seed bought by the Department some thousand farmers will be given small lots under the auspices of the Experimental Union. Some 10,000 school children who are taking part in Rural School Fairs will also receive small quantities. In every county in Old Ontario, the District Representatives will conduct demonstrations showing the relative value of seed grown in New Brunswick, in Northern Ontario and in Old Ontario. Besides this, some 40 acres of potatoes will be planted by the Ontario Department of Agriculture on Government owned farms in Northern Ontario in order to produce foundation stock of A1 quality for northern growers. In addition, we plan to assist, to some extent, farmers in securing northern grown seed. We are planning to take three carloads of seed potatoes from New Brunswick of the Irish Cobbler and Green Mountain varieties, certified as to freedom of disease by the Dominion Government, to the growers in Northern Ontario. This seed will be distributed at cost to farmers in three or four of the best potato producing sections in the north. The freight charges on these shipments will be paid by the Government because freight charges between New Brunswick and Northern Ontario are high and it is in the interest of the Province that a large potato industry become established as quickly as possible in Northern Ontario. So far as Old Ontario is concerned, we have arranged to put farmers who wish to buy seed of high class quality of the Green Mountain and Irish Cobbler varieties in touch with New Brunswick sellers of the same. This seed was inspected last summer in the growing condition by Dominion Inspectors, was inspected last December in the bin and will be inspected in the spring before being loaded. Farmers and Farmers' Associations, therefore, who wish to purchase seed potatoes

in carload lots may do so at a reasonable price and with a minimum of work on their part.

Next summer we plan to have a staff of inspectors who will make a survey of Old Ontario to determine the exact disease conditions as they exist. Other inspectors will work in the north, roguing the crops which result from the first class seed being shipped in this year, and roguing also other fields of first class varieties reasonably free from disease and true to variety. By the fall of 1918 we should know just how badly Old Ontario growers need a change of seed and by that time we shall have made provision for an ample supply of first class seed grown in New Ontario to very largely meet this demand.

Prof. Howitt: I wish to point out to you that from the standpoint of disease northern grown seed has a great advantage over the seed grown in Old or Southern Ontario. Mr. Miller has called your attention to the fact that in Southern Ontario there is a very high percentage of serious diseases, especially of the so-called "physiological" troubles, such as leaf roll, mosaic and curly dwarf, while in Northern Ontario there is a very small percentage of such diseases to be found.

What have these diseases to do with the seed situation between Northern and Southern Ontario? Those who have worked with the eradication and control of such diseases as leaf roll and mosaic have shown that they are transmitted chiefly through the seed, that is seed from a leaf roll plant will produce leaf roll plants and seed from mosaic plants will produce mosaic plants. Therefore, if we continue to use potato seed produced in Old Ontario we will be almost sure to be using seed from diseased plants, and hence have disease in our crops year after year, while on the other hand if we use seed potatoes from New Ontario we will be using seed from plants practically free from the so-called "physiological" diseases, and therefore should secure a crop almost entirely free from these diseases.

So far as the physiological diseases are concerned, the solution of the problem seems to be to import the seed from northern districts, which are practically free from these diseases. It must not be thought, however, that obtaining seed from New Ontario will prevent all diseases. If our crops are to be entirely free from disease, in addition to importing seed we must treat the seed to prevent scab and black leg and spray to prevent blight.

Dr. Zavitz: The advisability of changing seed potatoes frequently from one farm or from one section to another has been a matter of discussion for very many years. We have probably obtained more information on this question through recent experiments than was obtained through many years of practical experience formerly.

When I was in England some years ago I saw the results of experiments with seed potatoes obtained in England in comparison with those secured in Scotland. The experiments were conducted in a somewhat similar manner at the farm in connection with Cambridge University at Cambridge, at the farm of the Royal Agricultural Society of England located at Woburn, and at the farm of the Agricultural College at Newcastle. In the experiments on each of these farms the seed potatoes from Scotland were making a better showing than those produced somewhat farther south in England. At a later date I had an opportunity of visiting one of the largest potato growers in Ayrshire. I found that he grew an early variety of potatoes for market and planted a second crop on the same land in the same season. The second crop would be about one-half grown or less at the time of harvesting in the autumn. These immature potatoes were grown and were

used for seed purposes. I was informed that such seed gave very satisfactory results and that it was a general practice in that locality to use immature seed potatoes for planting. This corresponds closely with the practice of using stecklinge mangels for seed production which has already been discussed at this annual meeting. We should keep in mind that neither potatoes nor mangels are seeds. Potatoes are simply developments of the stems underground, the seed of potatoes being produced on the upper part of the plants. Potato seeds are about the size of clover seeds.

In the following year, after returning from Great Britain, we started an experiment at the College by planting two varieties of early, two varieties of medium and two varieties of late potatoes at different dates throughout the season, starting in the latter part of May and allowing two weeks between each two dates of planting. The seed potatoes from the different dates of planting were carefully stored and used for planting at a uniform date in the following year. This experiment has now been conducted over a series of years and the results indicate that immature potatoes have a special value for seed purposes. The lightest average yield per acre has been obtained from the potatoes which were the most fully matured, and as the immaturity of the potatoes increased the yield per acre from the resultant crop increased.

Another experiment was started a few years ago in testing seed potatoes obtained from different sources. We secured potatoes from five or six different localities in New Brunswick, also from Southern Ontario and from Northern Ontario, the latter being about 150 miles north of Toronto. In every year of this experiment we obtained the highest returns from seed obtained in the Muskoka district of Ontario. The New Brunswick seed held an intermediate position between that of Northern and Southern Ontario. As a result of these two experiments we come to the conclusion that the value of northern grown seed potatoes is largely due to the fact that they are grown in a comparatively cool climate and that they are frequently harvested before the vines are thoroughly ripened. In talking over the matter with Dr. Creelman it was decided to look into the matter thoroughly in regard to Northern Ontario as an important source of seed potatoes of high quality for planting in the southern part of Ontario. As Mr. Miller has mentioned, he, Mr. McCubbin and I visited all the districts in New Ontario and three of the main commercial potato growing sections in Old Ontario last summer. Our high opinion of Northern Ontario as a source of seed potatoes was confirmed. We have had two or three potato conferences in the Parliament Buildings, Toronto, called by Dr. Creelman, and the potato industry is being placed on a more definite basis than ever before. With the desire of the Minister of Agriculture and the encouragement of the Commissioner of Agriculture, the seventeen Provincial Government farms connected with various institutions under the Government will probably be utilized more than ever before for the purpose of producing seed of various kinds, and this closer co-operation, it seems to me, should meet with general approval.

References have been made to certain diseases which have increased rapidly in connection with the potato crop in Ontario in the last two or three years. Let us remember that the last three years have been abnormal seasons in connection with potato production in this Province. In looking over the statistics for the Province of Ontario for the last thirty-five years we find that for the three years, 1912, 1913, and 1914 the average yield of potatoes was the highest, and for the three years, 1915, 1916 and 1917 the average yield per acre was the lowest of any three consecutive years during the whole thirty-five year period. This is exceedingly inter-

esting and important and should be taken into consideration in looking into the potato situation. It shows that there has not been a gradual deterioration of the potato crop in recent years, but that the present potato situation has been brought about largely through the very abnormal weather conditions. It will be interesting to watch the progress of some of these so-called physiological diseases of the potatoes in years which are naturally favorable to the production of heavy crops. At present, however, it would seem advisable for us to pay particular attention to seed potatoes grown in the north and which are comparatively free from disease.

CO-OPERATION IN WOOL MARKETING.

R. W. Wade, Toronto.

Up to the year of 1917 there had been no co-operative marketing of wool in Ontario except by one or two small associations in the Island of Manitoulin, but in the other Provinces of the Dominion, in some cases for several years, they have collected, graded, and marketed the wool. So you see that we in Ontario cannot take any blame for being premature in anything we may have done in this respect.

The question of co-operative marketing of wool did not exactly come from the people themselves; there may have been some talk here and there in localities, regarding the advisability of such a system. There had been no general demand for it, but at the meeting of the Ontario Sheep Breeders' Association, held last February, there was a motion that was unanimously carried (and I think there would be 200 sheep breeders there) and the motion was that the Ontario Sheep Breeders would institute co-operative marketing in the Province of Ontario.

Up to that time there was nothing but a motion on paper, and it was necessary to explain to the wool growers of the Province exactly what would be done, and before that could be done it was necessary to go into the work that had been done in other Provinces, and to formulate certain rules and regulations. This took time, but eventually there was sent out to the people who were known to be raisers of sheep, application forms giving certain information on the subject.

As Ontario is not organized like some countries, and it was not easy to find out off-hand to whom to send these applications, the District Representative of each county was asked to give the names and addresses of men who had sheep, and I may say it is owing to the very efficient work of the District Representatives in supplying this information that we were able to send out the application forms to something like 9,000 men. I do not know how many people actually raise sheep in the Province of Ontario, but would expect it would be anywhere between 8,000 and 10,000, as in sending out 9,000 forms there might be some duplicates.

Owing to it being the first year, we had to estimate what we would require in the way of supplies, and we were, therefore, very anxious to have the men make application early. We did not receive the applications promptly and the Department of Agriculture put page ads. in the agricultural papers calling attention to the advantages of co-operative marketing and giving the rules and the information which had already been given on the sheet.

At that time we had 100,000 lbs. of wool, that is to say, reckoning so much per fleece, we had practically applications for that much, that was up to the 23rd of April. Following that advertising and some other notices, we extended the time for application and received applications after that which totalled over 100,000 lbs.

We cannot say the advertising in the press actually brought 100,000 lbs. of wool, because some men would rather be a little late than be on time and no doubt some who intended to make application were just waiting to have the spirit move them.

Well, the wool began to come into Guelph and people began to notice a little, and there were a great number bringing in wool, making application, and asking for supplies. All this made it very difficult to carry on the office work in as satisfactory a manner as one could have wished.

We eventually got about 270,000 pounds of wool, and I think, without a doubt, that it was the best wool in Ontario, because we had the most progressive sheepmen as shippers. Some good men, however, did not ship with us. I know one man with a beautiful flock of sheep, the wool of which would have sold for 67c. per lb. He said, "I think this co-operative movement is all right, but it will take a year or so before the Association can get the highest prices, and I do not intend to sell with them this year." I can't state definitely, but think the outside price he received was 45c. Taking this amount from 67c. would leave a difference of 22c. less freight and the loss he might have had in shrinkage.

It is not a matter as to what price we are getting at all; if you are going to look to the price every time why keep out of co-operation. What you should do is to look at the principle, and if right, stay with it. We had a man write to the office and say, "I have been offered 57 cents, and if I receive that amount I will be satisfied, but if I do not receive it I will not be satisfied." For curiosity I looked to see what he received—some sold for 63c. and some for 67c. We, however, told him it was too bad, if he looked at it in this way, that he had not sold his wool privately. If you have to be paid to do what you know eventually is a good thing, you are not a bit better than the child that smiles when you give it candy, are you? Not a bit; therefore, if you know that you are right you do not need that incentive, though for one or two years, or for a certain year you are not making more profit than your neighbor, who is not selling co-operatively.

As soon as the wool was sold the price jumped anywhere from 5c. to 6c. and the farmers who had not already sold got the benefit, and I am glad that they did get the benefit. As one buyer stated, "There is nothing to it, we will have to pay for the wool from now on." Buyers had been securing wool as cheaply as they could and hoped to keep the price down, but now the price went up and it went up earlier because 300,000 lbs. of wool was being collected, graded and sold in one place.

There is this also to note: You must not only market your wool in the right way but you must see that it is put up in the right way in order to appeal to the buyer, therefore, the pasture should be free from burrs, the wool should be grown on well fed, thrifty animals. The shearing should be done so as to leave the fleece dry, clean and intact. Each fleece should be tied so as to make a compact bundle and should be closely packed in shipping sacks, carefully labelled and addressed to the central market.

Now, if you have your wool properly prepared, it is up to the Association to so grade and handle it that when it is placed for sale the quality and grade shall be such that the Association's name and grade on the sacks is counted by the buyers as equivalent to the "Sterling" mark on silver. You must believe in the principle of proper marketing. You must believe in doing your share in making it a success. You must have the courage to stand with it and you must think of the other man who is buying your product in order that you will feel that you are giving him exactly what you say you are, just the same as if the King was buying the wool.

RESULTS OF FARM MANAGEMENT SURVEY IN CALEDON TOWNSHIP, PEEL COUNTY.

A. Leitch, B.S.A., O. A. College, Guelph.

During October and November, 1917, itemized records of one year's business transactions on 113 farms of Caledon Township were taken. The "Farm year" in this case was taken to be from October 1, 1916, to October 1, 1917. The purpose of this survey was to permit of a study of those factors which have the greatest influence toward raising or lowering the net income of the average farm. Every farmer is conducting his business with the idea of obtaining the greatest possible return from the labor and capital expended. But it is an equally well known fact that while some men come fairly close to this objective, others fall far below. The basis of this study was the comparison of the methods of the former group of men with those of the latter.

Owing to the fact that quite a large number of farmers were not able to get their threshing done until very late in the season, certain records could not be completed. For this, and some other minor reasons, only 82 of the original 113 records were found to be available for study.

Labor Income.

By the term "Labor Income" is meant the net receipts, after paying all expenses of the farm, including 5 per cent. interest on the capital invested, and paying for all labor save that of the man who actually operated the farm. Labor performed by unpaid members of the family is charged at what it would have cost if hired. The decrease in value of buildings and machinery, due to one year's use, is also calculated and charged. No account is taken of what the farm supplies directly to the table.

Adjusted Tillable Area.

In order to compare farms on which the percentage of waste land, or untillable pasture land was comparatively high, with those which were practically all tillable, a basis of "adjusted tillable area" had to be adopted. It is considered that about four acres of rough pasture or six acres of pastured woods are equal to one acre of tillable land. Hence, to the "tillable area" of each farm was added one-quarter of the number of acres of non-tillable pasture, and one-sixth of the number of acres of woods pastured. The total was called the "adjusted tillable area" and the grouping according to size was made on this basis.

Table 1.—Influence of Size of Farm on Labor Income.

Acres.	Under 85	86—100	101—150	151—241
Number of farms	25	16	22	19
Size, average	72.3	93.2	129.6	175.3
Capital, average	6,944	8,942	12,635	16,111
Capital in buildings, average	2,192	2,678	3,693	4,472
Capital in machinery, average	422	510	598	789
Productive capital, average	4,330	5,754	8,344	10,850
Percentage of capital in buildings and machinery, average	37.7	35.7	34.0	32.7
Crop, acres per horse, average	18.8	21.1	20.6	22.5
Crop, acres per man, average	46.9	58.0	60.5	63.4
Labor income, average	$507	$891	$1,091	$1,581

	Average of all Farms.
Receipts per Live Stock Unit	$74 70
Feed per Live Stock Unit	56 80
Profit per Live Stock Unit (over cost of feed)	17 90
Crop Yields	100%

Note.—A live stock unit is one mature cow or horse, or a proportionate number of smaller animals, maintained for one year, 2 head young cattle, 7 sheep, 100 hens, hogs according to weight. (Sometimes abbreviated to L.S.U.)

Table 1 shows one very striking result—that the amount of labor income increases directly with the acreage of the farm, or, otherwise, increases directly with the size of the farm business. All the farms were engaged in practically the same type of farming. As will be seen, the average labor income for the group of farms under 85 acres in extent was $507, whereas that for the group over 150 acres in extent was $1,581, those of the other two groups ranging proportionately between.

The low average of the "small farms" group indicates that on these farms the farm business is too small to pay the necessary overhead expenses, common to all sizes of farms, and leave enough profit to pay the operator more than laborer's wages. In fact, in a year when prices of farm products are normal, these men very probably work for nothing.

Looking more closely into the matter, we see the explanation for this fact. In the first place, although the capital invested in buildings and machinery varies more or less directly with the total farm capital, it is somewhat higher on the small farms—37.7 per cent. as compared with 32.7 per cent. And this higher percentage, deducted from an already small total capital, leaves a much too small amount of productive capital to permit of even a moderately high labor income. In the second place, the man and horse labor is more costly on the small farm than on the large. On the small farms one man performed the labor on only 46.9 acres, and one horse on 18.8 acres, whereas on the large farms one man performed the labor on 63.4 acres and one horse on 22.5 acres. Nor were the small farms farmed more intensively. In fact, the average crop yields per acre on the small farms were 11.8 per cent. lower than on the large farms. The highest crop yield averages were on the two intermediate groups, these being about equal, and being 20 per cent. higher than on the small farms.

TABLE 2.—INFLUENCE OF GOOD CROPS AND GOOD STOCK.

——	Live Stock below average.		Live Stock above average.	
Crops below average	Number of farms	26	Number of farms	21
	Average size	108	Average size	112
	Labor income	$508 00	Labor income	$1,047 00
	Labor income per acre	$4 70	Labor income per acre	$9 35
Crops above average	Number of farms	14	Number of farms	21
	Average size	127	Average size	120
	Labor income	$977 00	Labor income	$1,530 00
	Labor income per acre	$7 70	Labor income per acre	$12 75

Table 2 shows the relative influences of crop and live stock production on the labor income. Owing to the difference in average size of farm in the various groups, the "Labor Income per Acre" has also been calculated. It will be seen on comparing both groups with live stock below the average, that an increase in

efficiency of crop production means an increase in labor income of $469—or an increase of $3.00 per acre. Likewise in the groups with live stock above the average, an increase in crop production increases the labor income by $483—or $3.40 per acre. But on comparing the two groups with crops below the average, it will be seen that an increase in returns from live stock adds $539 to the labor income—at the rate of $4.65 per acre. And comparing the two groups with crops above the average, we find that an increase in stock returns means an addition of $553 to the labor income—or $5.05 per acre. Otherwise, if we make a comparison of the group with both crops and stock below the average with the group underneath and the group to the right, we see that with stock the same and crops increased, the rise in labor income is $469, or $3.00 per acre, whereas with crops the same and stock returns increased, the rise in labor income is $539, or $4.65 per acre. Thus, the conclusion is necessarily reached that in the area surveyed, the greatest opportunity for raising the labor income lies in increasing the quality of the live stock.

Table 3.—To What Extent Does Good Feeding Pay?

Feed fed per L.S.U.	Under $43	$43–50	$50–60	$60–70	Over $70
Average cost per L.S.U.	$36 46	$45 90	$54 21	$63 74	$82 62
Receipts per L.S.U.	$67 91	$70 56	$78 74	$77 09	$78 41
Number of farms	16	14	19	16	17
Average size	108	129	129	116	96
Labor income	991	1,241	1,104	907	722
Labor income per acre	9.2	9.6	8.6	7.8	7.5

This table adds further proof to the well-known law that after a certain degree of production has been reached, a higher degree cannot be attained without lowering the net profits. The cost of the final returns is more than the sale price. The amount of feed which may be fed profitably will, of course, depend upon the quality of the stock. With the average of Caledon Township stock approximately fifty dollars' worth of feed may be fed profitably. It will be seen that the receipts per live stock unit in the last three groups are practically the same. The increase in feed did not increase the returns. Hence, the profit was lowered, with the direct effect of lowering the labor income. In the group which was fed most heavily each live stock unit yielded a loss of $4.21 on feed alone. The labor expended on this stock was also lost. As the average size of farm varies somewhat in the different groups here also, the "Labor Income per Acre" has been calculated. It is highest in the second group, where the average feed consumed amounted to $45.90 per live stock unit.

Summary.

Briefly then, the findings of the survey thus far may be summed up as:

1. The size of the business on the small farm engaged in general mixed farming is too small to pay all expenses and leave more than a very small labor income for the operator.

2. High profits from live stock have a greater influence on the labor income than have high crop yields.

3. The quality of the live stock determines the amount of feed which may be fed profitably. Heavy feeding to stock of low quality means a loss rather than a

gain. In order that the crops grown may be fed upon the farm to keep up the soil fertility, and at the same time yield a profit, the quality of the stock on a great many farms must be increased.

Note.—The figures in the tables of this report are those of all the farms surveyed, while those given in the actual address were those of only forty-nine of the farms surveyed.

DRAINAGE AND TILE MAKING.

J. R. Spry, B.S.A., Toronto.

It is not my purpose to spend any time in discussing the various methods of installing drains or the benefit derived from drainage, but I wish to present for your discussion several points which should receive the earnest consideration of the farmer.

There has been too little attention given to the construction and maintenance of open ditches. During the past few years the Department of Agriculture has conducted a vigorous campaign in underdrainage, and one of the chief factors retarding this work has been the lack of open ditches of sufficient depth and carrying capacity to serve as efficient outlets. Why such a condition should exist is difficult to understand, but one of the reasons is doubtless due to a lack of study of the drainage problem by the engineers and farmers who construct the drain. The ditch is too frequently planned only to meet the needs of the land immediately adjacent to the ditch and other lands in the drainage area, although assessed for its construction, are frequently little benefited. To illustrate my statement, a short time ago I had occasion to survey a farm for underdrainage purposes, the owner of which had been active in having an open ditch constructed and for which he was assessed outlet benefit. This ditch crossed one end of the farm in question and was 3 to 4 feet deep. After carefully surveying the farm we could just get two inches of grade per hundred feet for the portion near the ditch, and could not get sufficient covering to permit the use of underdrains on more than forty acres lying furthest from the outlet. No engineering difficulties prevented the outlet ditch being lowered several feet had those in charge of its construction but ascertained the needs of the farm, and good drainage would have thus been given to the entire area assessed. A second survey was necessary which meant further cost which could have been avoided had the matter been properly handled in the first instance.

Another cause for lack of proper outlet ditches is the desire for cheap construction on the part of some land owners. In a certain county where open ditches are notoriously shallow, the engineer stated that it was so difficult to obtain unanimity in drainage matters that to avoid hostility to proceedings small ditches were constructed which did not occupy much space nor require the construction of large culverts. Rather than go to the trouble involved in reconsideration, and the bad feeling frequently resulting, those desiring the drainage work frequently accept a partly efficient ditch. This condition exists more or less all over the Province, but particularly when the construction of drains comes under the Ditches and Watercourses Act.

A third reason may be found in the Ditches and Watercourses Act, or rather a lack of serious co-operation as permitted by this Act. This Act was planned to give to the farmers authority to construct drains without any serious interference

from the Municipal Council. It was planned to save cash expenditure by permitting the work to be done by those interested and aimed to avoid costly law actions for damages. The Act gave opportunity for co-operative ditch construction by the farmer without outside interference. What has been the result? If five farmers are interested we oftentimes have five different ideas as to location, width and depth. Lack of uniformity in construction results, and in some instances one or more parties to the agreement, through failure to carry out his part of the work efficiently and promptly, seriously injures the ditch. The maintenance of these ditches falls a portion to each one interested and needed repairs are made when the one responsible gets good and ready.

As farmers, we have not taken advantage of this Act, and, while it may be criticised for not providing for this or that, the spirit of the Act cannot be mistaken. The result is that procedure under the Ditches and Watercourses Act is being discouraged by engineers, and many ditches which could be brought under the Ditches and Watercourses Act are being constructed under the more expensive Municipal Drainage Act.

The amount of litigation over drainage affairs is regrettable and it would appear that if we are to make real progress some other way of handling the outlet drains will have to be adopted.

The fact that the Municipal Act works smoothly where the Ditches and Watercourses Act fails would suggest the remedy to be planning on a larger scale, that is, drainage plans could be made for an entire drainage area, all drains necessary for that area being laid out before any one drain was constructed. This would mean that there would be no duplication of drains, no overloading of drains, each and every acre would be served and so many owners would be interested that the opposition of any one man, or small clique of men, could not seriously embarrass the carrying on of the work.

Lack of labor and capital have been handicaps, but have been largely overcome: the lack of labor by the introduction of excavating machines, which are giving excellent satisfaction, and the lack of funds by assistance given by the Provincial Government.

Ditching machines have passed out of the experimental stage, and have almost completely displaced the old hand method. With the advent of the machines has come the planning of large and elaborate tile drainage schemes, and this has created a demand for expert supervision. Considerable careless and faulty work has been done and some method of inspection of drainage installation is needed, either of a municipal or provincial nature.

The distribution of funds borrowed under the Tile Drainage Act is a matter of interest. In 1915, 83 per cent. of the money thus obtained went to the Counties of Essex and Kent, the remaining 17 per cent. going to ten other counties. In the County of Essex ten out of fourteen municipalities borrowed money, and in Kent eight out of thirteen took advantage of the Act. In Lambton three municipalities borrowed money, in Wellington two, and in Bruce, Lincoln, Oxford and Victoria one each.

In 1916 Essex and Kent took 91 per cent. of the total drainage loan, the balance going to two or three other counties. If you follow the history of this Act back to its initiation you will find that the money loaned has gone largely to the two or three counties mentioned, many sections of the Province having made no use whatever of the opportunities thus offered for cheap money on easy terms of repayment.

The supply of tile is in many localities becoming a problem. Various attempts

have been made to relieve the situation, one of which is the introduction of small concrete tile-making machines which are intended to enable the farmer to make his own tile. Of these several makes of machines only one is now on the market, and we can say, with little fear of contradiction, that tile-making on the farm is a failure. I would not say that good tile cannot be made by these machines, but I do say that on the farms the cost of manufacture has been so high, and the quality of tile produced so inferior that I do not consider the manufacture of tile a good proposition for the farmer.

We have two other types of concrete tile machines, the small power machine which is portable and the large power machine which is designed for a commercial plant. The small power machine has had considerable sale with farmers, one or two men purchasing and operating the machine co-operatively. Lack of manufacturing facilities, especially for curing the tile, have in many cases produced unsatisfactory results, so that this scheme is not to be recommended.

It appears that the manufacture of tile should be left with the commercial plants.

We have but one kind of clay tile in general use, the common weeping tile, red or white in color. The O. A. College reports a slight difference in crushing strength in favor of the red tile, but color is not an indication of quality.

Tile, to be first class, either clay or concrete, should have straight sides, square clean cut ends, and clay should give a clear metallic ring when struck with a piece of metal. Quality in concrete tile is not so easily determined. The edges should not crumble beneath the pressure of the fingers, but most important in determining quality is the method of curing. Sprinkling will produce good tile but usually a considerable number of tile when cured in this way are of poor quality. Concrete tile should be cured in a steam kiln, which method gives fair assurance of a good article.

The manufacture of tile should be left with those already engaged in the business and we can best stimulate production by giving these men a guarantee of sale of their product together with some information as to size required.

Heretofore the manufacturer has had to depend entirely upon his own judgment as to the probable demand and frequently has had considerable stock of certain sizes left over. On the other hand the farmer has not ordered tile until he wants same for immediate use, and frequently cannot get the quantities he needs or the sizes required for his work.

The shortage in tile supply may be greatly improved by organizing the demand for tile in the community in which the yard is located. The quantity of each size should be ascertained and the time for delivery stated. This information should be supplied to the manufacturer say six months ahead of the time when the tile will be required so that a stock may be accumulated by the manufacturer, otherwise we may expect that at certain seasons there will be a shortage, for there seems to be no disposition on the part of the manufacturer to invest in a heavy stock which past experience has demonstrated may be left in his yards.

The number of yards manufacturing tile is steadily decreasing, but improvement in the quality of concrete tile together with an organized demand from the farmer will greatly help relieve the situation.

A. Wehlann: Most of the drain tile in use is made from clay which is burned to a rocky hardness. This clay is found in nearly all parts of Ontario and belongs to the class known as alluvial. It has two distinct appearances on burning, one becoming white and the other red. Besides these there are varying shades between the two colors. Clays which burn white are usually found in banks or hills, while

the clays which burn red are usually found in a flat country. In the white or blue clay districts the presence of limestone is a detriment in the manufacture of tile, and in the red clay districts the presence of many kinds of dirt cause inconvenience in the manufacture. Where the red clay soils are pure enough to use they make a tile that will stand the ravages of our unsteady winters better than any tile made from white clay.

Our Western Ontario Clay Association has taken up the standardization of bricks and drain tile and has become active in the establishing of Technical or Trade Schools. Our business is classed under the head of mining and our products stood sixth in value among the products mined in Canada during the last ten years. Our business is the foundation of the greatest industry Canada boasts—agriculture. We enable farmers to build comfortable homes and outbuildings and provide the material with which their farms may be drained. This year there is a great shortage of drain tile owing to scarcity of labor, and next year it may be even worse. Production on the farms is the great cry. Nothing can aid production more than good drainage which may be provided by using burned clay drain tile.

Hon. Nelson Monteith: This is indeed a very important subject in its relationship to successful agriculture. I remember well when I left this institution some twenty-eight years ago that I was fired with enthusiasm to drain. I thought every acre should be drained on every farm, and during the first two years on the old home farm after my return I laid with my own hands 25,000 tile. One of the mistakes made at that time in draining was that farmers used too small tile. These were often put in because of the lesser cost.

I may say from my own experience, that no investment in my work on the farm or outside has given better returns than underdrainage. I found the soil easier to work, the spring operations commencing earlier and the crops yielding better on the land that had been tiled. Some soils are very heavy and close in texture, and experience has taught me that there is a possibility on this soil of putting the tile in too deep to get the best results. On my farm, drains at a depth of three feet have been very effective. Good tiling material will last a long time. I saw tile removed in the neighborhood of St. Thomas that had been in the ground for thirty years and they were still in splendid condition.

It is my personal experience that even with the present high price of labor and material, no man can afford to farm without paying attention to drainage. There is very little land in western Ontario but could be improved by better drainage and a good profit would be made on the investment.

ONTARIO'S AGRICULTURE IN THE PRESENT CRISIS.

Dr. G. C. Creelman, O. A. College, Guelph.

The President of the Union in his report spoke of the present agricultural crisis; the Vice-President, Mr. Webster, in replying also spoke on the same subject and I suppose no address can be made to-day without reference to it. I am only going to touch on three or four things that seem more or less pertinent to the subject. Some of these have proven their worth and others have yet to be proven.

I know from my observation through the Province and from talking with Dr. Zavitz and others, that the great necessity during the coming year is for a

larger production of grains of all kinds. I do not think it will be necessary to proclaim that to the farmers of the Province of Ontario. They understand the situation and there is perhaps no class of crop that can be grown so easily and with as little labor as grain crops.

We have been asked by those in authority in Great Britain, the United States, Canada and France to supply grain in large quantities. The greatest need is for wheat, then oats and barley and other substitutes. Unfortunately, the present winter will be a severe one on the fall wheat crop. We did not plant as much land to this crop by one-third as was intended on account of the extreme dry weather and the hardness of the soil at sowing time. The result was that a considerable area of land was made ready but not sown; this will be available for cropping in the spring. Let us use this land as far as possible for spring wheat. While this crop may not be as profitable in some parts of Ontario as winter wheat yet it will yield fair returns and we will be materially assisting the Empire by growing it.

How the Threshing of Ontario's Cereals Might be Made More Efficient.

Situation in Ontario. Farmers are shorter of labor than they have ever been. Next year, in a great many cases, there may be but one man on a farm. If this is true, these men, in order to get one day's threshing done under the existing system, will be compelled to stop their own work in the fall for some two weeks, to change work with neighbors. That will mean that not only will the farmer's labor be diverted from his own farm but his horses and equipment will be idle—a bill of expense—for that length of time. In consequence his fall work will suffer, the customary area of land will not be plowed and in the spring of 1919 he can not hope to plant anything like a normal crop. Larger areas of rough fodder will then be grown, without a corresponding increase in live stock possible. This in turn, applied to the whole Province, will mean smaller receipts for the farmer, much less work for the threshers and a decided diminution in the war strength of the country.

These conditions will also apply to a less, but still to an important degree, to those farmers who have some additional labor besides that afforded by their own families. It is a question that must be met, both to safeguard the farmer and thresher and as a patriotic duty.

The Threshing Gang. It would ensure a great saving of time and an appreciable increase in production if some method could be devised whereby farmers would not be compelled to change labor at threshing time during the remainder of the war—that fact is self-evident. There seems two ways only of effecting this: First, by the employment of threshing gangs; second, by the use of small individual outfits. Let us consider the gang method first.

In the 36-year average (1882-1917 inclusive) the yields of crops usually threshed in Ontario were as follows:

Fall Wheat	17,632,724	bushels.
Spring Wheat	5,318,399	"
Oats	82,479,705	"
Barley	17,995,753	"
Rye	1,956,014	"
Buckwheat	2,543,635	"
Peas	10,173,930	"
Total	138,100,160	"

Assuming that each outfit in Ontario threshes an annual average of 50,000 bushels, there are some 2,762 threshing outfits in the Province. Besides this some 4,000,000 tons of silage corn are grown yearly which have to be cut. If the minimum efficient gang consists of 8 men this would imply 22,096 men thus employed for between three and four months of the year.

Difficulties and Counter Measures. (1) One major difficulty will be to secure these men. As, at best, a large number of districts will not be thus organized, this number will be cut probably in half. Gangs might be secured by employment of alien labor, conscription of labor for that period from less important industries, and volunteer labor.

(2) Idleness during the frequent changes from farm to farm caused by the comparatively small amount of grain to be threshed at the average farm will also be a great difficulty to overcome. This time lost may be limited, however, by good organization so that the majority of changes may be made at night. If farmers did not have to change labor and could devote this time to their own business they would probably be prepared for threshing so that a machine could go from farm to farm right down a concession. If the men were boarded by the thresher in a travelling kitchen, the farmer's work would be still further decreased. But as all this expense would have to be met by the farmer in an increased threshing bill, he might be among the first to discredit the scheme.

(3) The increased threshing charge per farmer is the third great obstacle. In the past the farmer has probably not attached sufficient value to his own labor. Moreover, his board bill would be relatively higher when gangs were employed as he would be taxed for the food consumed on Sundays and on other days when the gangs did not work.

Explanation, however, might remove this obstacle. If by employing a gang the farmers were enabled in the two weeks thus saved to prepare an additional 10 acres say, for wheat, he would profit enormously by the arrangement. He would then have from 200 to 300 extra bushels of wheat to sell valued at from $400 to $600. Even though the gang cost him $40 or $50 he would gain, while at the same time doing a most important national duty.

(4) The financial condition of many threshers may be another difficulty to overcome. Many may not be able to organize a gang and secure the additional equipment required. But if the plan is otherwise good, credit, under some kind of proper supervision, could be advanced either by business interests, the Government, or both.

The Small Individual Threshing Outfit. There are many features to commend this outfit. The grain may be stored until after the fall work is completed when the threshing could be done by the regular help of the farm. If feasible the threshing may be done when the grain is hauled into the barn at harvest time. In either case, however, the work is accomplished more slowly than with the larger outfit and under normal conditions many farmers might prefer the more rapid method.

The cost is an important item also. The smaller sized machine (capacity 50 to 80 bushels of oats per hour) with engine (9 h.p.) and attachments has been quoted to me at $1,180. The larger outfit (capacity 70 to 120 bushels of oats per hour) with engine (14 h.p.) has been quoted at $1,340. This is a sum which would tend to discourage many farmers from buying an outfit which could be used but a few days in the year and which might be considered by some as required only in abnormal years. Farmers with large areas might be assisted in this way; the 100-acre farmers would not likely make many purchases unless under some co-operative arrangement.

The path of least resistance seems to be the employment of gangs where they will be required; the purchase of small outfits by those who can use them most profitably; and, in those districts where the old system is considered satisfactory, to make no change.

The Use of Power on the Farm.

The other day I read an article that appeared in one of our agricultural papers that was written by a farmer whom I know and which I will quote:

"A few days ago I was visiting with some old friends over in Halton County. I first stopped with a lad I had gone to school with, and who is now running a 150-acre stock farm. His corn was still standing in the field and it had been frozen again and again. He had been unable to secure either a corn binder or the services of the local silo filling outfit. He was at the mercy of the itinerant thresher who also owned a cutting box and corn binder. Grain crops were especially heavy this year, and because threshing is more profitable than silo filling, he was at the mercy of the man who owned the machines. The result is that he will put in badly frozen corn and the quality of his ensilage will be decreased accordingly.

"On the way home I dropped in on another friend, who also lives in Halton County. I found that friend was one of a syndicate of five farmers who owned a 20 h.p. steam engine, a grain separator and grinder and complete silo filling outfit. Each of these men had an equal share in this equipment. Their plan was to hire a man to operate the machine from farm to farm. Each of the stockholders paid the regular rate for the use of the power and equipment, but they got first preference in threshing their grain and filling their silo. As a result the silos had all been filled here before the corn was badly frosted, and the threshing was done at the most advantageous time. Once the stockholders were through with the equipment the paid operator took the machinery along to fill other folks' silos and thresh their grain at the same rate per day as was paid by the stockholders. At the end of the season expenses were subtracted from receipts, a certain amount of the profits laid aside to replace the machinery when it wears out, and the balance divided as dividends on stock."

Five men found no difficulty on 150 acres each to carry an outfit of that kind. A farmer can with an investment of from $200 to $500 in conjunction with three or four of his neighbors provide himself with such an outfit.

We introduced the tractor plows into Ontario this year and the officials of the Department of Agriculture certainly have had many varied experiences resulting from the introduction. Each manufacturer insisted on his plow being given a trial but none were able to furnish experienced tractor operators. We had in operation both small and large tractors. Each of these classes will do good work when we come to thoroughly understand them and get a better class of labor to operate them. The best work last year was done where we could get operators from the shops where the tractors were made and who had some idea of gasoline as fuel. What we need to operate these tractors is a real good farm boy who knows how to plow and who is handy with machinery.

We are putting on a tractor course here at the College which will commence two weeks from to-day. We already have, without special advertising, fifty applicants for that course. At the present rate of application we will have nearly 200 men taking that course and who will be operators for us and for owners of tractors. Several tractor manufacturers have informed me that many farmers purchased tractors last year on their own account for use on their own farms.

All that we hoped to do last year and about all the Government could do was to demonstrate whether the tractors were practicable or not. The farmer couldn't afford to buy an untested tractor on his own account so we did this work for him and spent a good deal of money to find out the practicability of tractors for use in the small fields of Ontario farms. To assist in this work a number of tractor demonstrations were held at plowing matches in different parts of the Province.

The Vegetable Garden Campaign.

We had a campaign to assist in increasing vegetable production which worked out well in the towns and cities. Near Ottawa 200 acres were devoted to the growing of vegetables. This was handled at first as an experiment but because of the interest taken in the work they made a decided success of it. What was done at Ottawa is an example of what can be done in other parts of Ontario.

The Poultry Campaign.

At the same time that we conducted our garden campaign we started a chicken campaign. We do not intend to advocate that this year. It is difficult to raise chickens without wheat and we have no other substitute just as good. We want wheat more than we want chickens. It requires twenty-five cents a month, which is three dollars a year, to feed a chicken. The result of the campaign was that we had an over-production of poultry and eggs in the Dominion of Canada. That is why eggs are still selling for 40c. to 50c. per dozen. Poultry is comparatively plentiful as compared with beef and pork at nothing like the increase in price. Eggs are nothing like as nourishing as oatmeal at the same price.

The Labor Situation.

I believe that at the present time it would be good business in this country if the Dominion Government would employ 100,000 Chinamen under bond and keep them during the continuance of the war. (Mr. Smith: We do not want them in this country.) I know there will be a lot of opposition to this scheme and I am not advocating the bringing here of Chinamen of the class we already have. The Chinese farm laborer comes from North China, and is not the type of man we have here in our laundries who comes from the south of China. He is familiar with farm work, sturdy and earns in his own country about $50 a year and boards himself.

Now we have to get some help somewhere—think it over—and, while Mr. Smith will not agree with me, it does seem when a country has a type of laborer such as I have described in unlimited quantities we might do worse than use it.

The Seed Situation.

In this crisis the question of good seed in the Province of Ontario is a vital one, and I cannot add any more emphasis to what Dr. Zavitz has said and suggested. The seed outlook for 1918 is not good and unless something is done the outlook for 1919 will be even worse. There is no reason why we do not grow our own root seeds the same as we do our grains. We cannot any more be dependent on Germany.

Our corn this year is of very poor quality. Mr. Fancher tells me that the best corn will not test more than 40 per cent. germination. This is corn grown in those counties where you get your seed supply. The United States seed corn is not any better. We require about 400,000 bushels of seed corn to plant our ensilage areas. If you know of anyone who has corn at all fit for seed do not waste any time getting it.

ADDRESS.

SIR WILLIAM HEARST, MINISTER OF AGRICULTURE AND PREMIER OF ONTARIO.

It is a very great pleasure and privilege that is mine to-night to have the opportunity of speaking to such an audience as this. I have before me men engaged in the great industry of agriculture; men studying that question from a scientific standpoint; men engaged in seeking as to how they can produce larger and better crops than have ever been grown before; and men who are engaged in the study of live stock in an endeavor to find out in what way they can bring about the result of greater increase in cheese and butter and in the products of the herds. The studying of these things is as important as the work the men in France and Flanders are doing at the front. Perhaps the most important work given to man in the world to-day is that of trying to provide the necessities to keep our men on the fighting line and to raise production to the highest possible standard.

A little over a year ago now, on the death of the late Hon. Mr. Duff, I took upon myself the responsibilities of the duties of the Minister of Agriculture in addition to those I had then upon my shoulders, that of Prime Minister. I want to pay a tribute to the former Minister of Agriculture, the Hon. Mr. Duff, a man loved by his colleagues in the Government, loved by the members of the Legislature and revered throughout this great Province of Ontario; a man with a great heart, with great possibilities and a man, I am sure, you miss to-night.

When I took upon myself the duties of the Minister of Agriculture I knew I could not bring to that Department any scientific knowledge, or any practical experience but I attempted to provide for that in another way. I did feel I perhaps could bring some executive ability to that position and some organizing force. I felt there were some things, as Prime Minister, I could do as Minister of Agriculture, that no other man could, filling that position.

One of the things I wanted to do was to personally study the questions and problems with which the farmers of the Province of Ontario have to deal. I wanted to study their needs and the difficulties they have to face so I could better help to solve the problems and meet the difficulties.

I felt also there might be better co-ordination among some Departments of the Government. As you know, we have large farms in different sections of the Province in connection with the Provincial Secretary's Department. Important scientific agricultural work was being carried on at these farms. Splendid herds had been collected at different points, and I felt that perhaps the benefit of the experience gained at these farms was not being as well established throughout the Province of Ontario as it should have been. That was one work I set myself to do, to co-ordinate the work of the Provincial Secretary's Department with that of the Educational Department, under which there are also Provincial farms, so that the very best results might accrue. Farms under the Provincial Secretary's Department have been set aside for the production of seed so that we could have a greater quantity for distribution than we have ever had before. We want to enlarge that work, and carry it out in such a way that the best results possible can be obtained. In that Department we have many hundreds of acres of the best cultivated land particularly adapted for producing seed of the best qualities in different lines. That will be emphasized and exemplified as far as possible in future years.

At these institutions we have very fine herds of different classes of stock.

We feel this may be made valuable for the farmers of the Province of Ontario in a way that will improve the stock in different sections of the Province.

In this connection I was more than interested this afternoon in the explanation we had of the agricultural survey that is going on in Ontario. I do not know that it has ever been my privilege to listen to statements that created so much interest in my mind and opened to me, at all events, such possibilities for education and for advancement. While listening to that and learning particularly the special weakness, I might term it, of agriculture as it is carried on in the township under review, it occurred to me that when we had the whole Province outlined more or less as that township is now, what an opportunity we would have to apply our knowledge to the weak spots and help build up the animal industry, thus bringing every section of the Province, as far as we can, to a high standard of excellence. In connection with our Provincial Secretary's Department I think we will be able to do much.

Then there was another very important reason, perhaps the most important of all. At the present time we understand what the importance of production means to the farmers of the Province of Ontario and to every section of this country in maintaining the struggle in which we are now engaged. I was not satisfied to leave the responsibility to another man, no matter who that man might be, to see that everything possible was done in the Department of Agriculture to assist production.

Sometimes the Minister of Agriculture is anxious to promote particular lines of work that he feels are good and he submits his estimate to the Prime Minister and his colleagues who do not always see fit to give him a free hand in the matter of expenditure. Each Minister is anxious to get appropriations for his Department which he thinks is more important than any other Department of the Government. In the final analysis the Prime Minister must take the responsibility for those appropriations, as he must for every other matter of administration and policy in the Government of the day.

I did not want to see the Minister of Agriculture this year stinted for appropriations and I took the responsibility myself. If there has been stinting in the question of appropriations I am responsible. But I want to say this, in the presence of the Commissioner of Agriculture and in the presence of the officials of this College, that not one single reasonable application has been made to me for money during the past twelve months that has not been granted. And I stand here to-night to say that so long as I am Minister of Agriculture that will be the policy I intend to pursue during the trying days through which we are now passing.

I said I did not propose to bring any expert knowledge in the study of agriculture or to bring any personal experience in agriculture although I spent my boyhood days on the farm. When I took that work over I brought to my aid and assistance the President of this College, Dr. Creelman, whom I appointed to the position of Commissioner of Agriculture, and I want to take this opportunity of paying him a well deserved tribute for the devotion he has given to his work, and the intelligent, capable and efficient work he has performed in that position for the last twelve months.

There is one thing I did not have an opportunity of doing as much of this year as I would like to have done—that was to go to different sections of the Province and to meet assemblies such as we have here to-night. We have had one campaign after another in connection with war work, patriotic, victory loans, red cross, election and other efforts so that I have not had the opportunity or

privilege, in view of the many duties I have in my office, to go through the country and meet those actually engaged in production.

I would like to urge on this splendid gathering the value of greater production, greater co-operation, greater sympathy and greater consideration for men in every walk and business in life. If the war has taught us anything, it has taught us the dependence of one upon another. In that connection I want to say this, with all the force I possibly can, that the man, whether he be farmer, politician or whatever he may be, who seeks to set one class against the other, who tries to create distrust one of another and to sow seeds of discord, is an enemy to his country and friend to none.

Where abuses exist, and they do exist in this country and in every other, call them to the attention of the Government or to the authority responsible for the same. If the proper remedy is not applied, condemn the one responsible for the abuse and for the failure to apply the remedy as forcibly and strongly as you wish, but do not, without proper information, make statements and insinuations that simply create prejudice, unrest and suspicion. Do not deal in generalities, but if you have anything that is a grievance, put it in concrete form and bring the same to the attention of one that is qualified to correct it. It is time then, if no effort is made to remove the grievance, to complain.

We realize the Department of Agriculture can be of little benefit to the Province without the help, sympathy and co-operation of the people engaged in the great industry of agriculture. With their sympathy, co-operation and assistance, we feel that great things can be accomplished. We want your advice, assistance and suggestions, and I assure you that whatever suggestions you have to make will receive my best consideration, as well as the other officials of the Department, and if found practicable and within the bounds of financial possibility, your advice will be carried out.

If you have problems you think we can help you with, bring them to us. We will be delighted to give any information we possess and do what we can to solve your problems. We cannot be of assistance unless you make your problems known and bring to us your difficulties.

As I said a moment ago, I was a boy on the farm and have given some study to agriculture. I know how absurd and unfair are many of the statements made by dwellers of the cities and towns with reference to the farmer. I just want to say that the fault is not all on the side of the dwellers in the cities and towns for the extent to which there is lack of sympathy between these different classes of people. The advances and efforts of the people in the city and town to become acquainted with the problems of the farmer, to say the least, have not always been met with enthusiasm. When men from the city, travelling like myself, attempt to give addresses on rural and farming problems, we are apt to be told that we are hot air artists and are talking about something we know nothing about and that we have no real sympathy or interest—that is by no means always the case. The good citizen of the community is most anxious to become acquainted and be of assistance if he can to the man on the farm, just as the good citizen on the farm is anxious to be of service to the man of the city. We are citizens of a common country, bound up in the prosperity of the country, and every man knows that the great corner stone of our future lies in the farming industry. There is absolute necessity for co-operation by men of all classes and conditions and but for this co-operation our gallant soldiers in the trenches would have been helpless and the light of freedom ere this would have gone out all over the world. Might would have triumphed over right.

Our gallant soldiers would have been helpless on the battle-front without guns and without ammunition. Guns and ammunition can only be produced by the investment of the manufacturers of their capital and experience in manufacturing and by the labor of the workmen and workwomen who assist in producing munitions and guns.

Again, the man with the gun could not live upon the battle-front without proper food and proper transportation. Food can be supplied from the farms of Ontario and other farms available as a source of supply to the front. On the other hand these supplies of munitions and foodstuffs can only be made available for the men at the front by the great transportation companies and by the protection of the British fleet in every section of the globe.

And in the last analysis, the monies could not have been supplied, the provisions could not have been amassed by the Government if they had not been able to secure from the people of the Province of Ontario the money necessary to do it. We have had experience of that in the Victory Loan. But for the great success of that loan the Government could not be producing munitions or financing the crops as it is doing. So we are dependent one upon the other—no man or no industry is sufficient in himself or itself.

Surely this is a time for us to look at every subject from the other fellow's viewpoint and try and improve our relations between each other and work together with greater harmony, co-operation and greater zeal for the common good than we have ever experienced in the past.

Now, if farmers are suffering from injustice from any standpoint, and no doubt they are suffering some, try and find the remedy and ask the proper authority to apply it. I must ask you, as citizens, to look at the matter from a broad national standpoint, not from the individual standpoint, but from the standpoint of the Province, the nation, the Empire and the world at large.

Sometimes you hear the complaint that we have not more farmers in our Legislature and in our Parliament. No one at this moment regrets the fact of not having a greater number of farmers in the Legislature that I have the honor to preside over, than I do. This is a matter that farmers alone can rectify. There is no effort on the part of any political leader, or political party to exclude farmers from the Legislature or Parliament. We are anxious to get them. They are generally the best and most popular candidates we can get and political leaders look for farmer candidates when election time comes around. The farmer does not take the interest in this connection which the professional man does, but this is a matter that is in your own hands to improve. I sincerely trust that we will find more men from the farm in the House of Parliament and in the Legislature, and that they will bring their practical experience and advice in all matters relating to this great industry of agriculture.

There are many difficulties that are of vital importance to us at this time in agriculture, matters that create difficulty both for you and for the Government. Perhaps the most difficult question the Department has to deal with, and the most difficult question you, as farmers, have to deal with, is the labor question. That was so during the past year and will be so during the present year. The Department endeavored, in co-operation with the Labor Branch, which is under the Minister of Public Works, to secure whatever labor was available and see that same was distributed in such a way as would be most efficient in accomplishing what was desired.

Seven thousand boys from the high schools of this Province went out on the farms last year, and the information we received from one section of this

Province to the other was that the work they did was splendid and was on the whole, satisfactory to the farmer. Several thousand girls from the high schools and colleges went on the farms as well, particularly to the fruit sections, and I am bound to say that the reports we received about the girls were infinitely good, even better than those about the boys.

Labor conditions are bound to be acute again this year, and from what can be seen at present conditions will be even worse than last year. We are getting some men back from overseas and are now in consultation with the representatives of the returned soldiers to see if they can go on the farm and work this year. There are several thousand of these men who have had farming experience and who have done their utmost bit on the firing line and are willing to do still more by going on the farm and helping to produce. At the present, we are to some extent marking time and waiting to see what will be done at Ottawa. The question is under the consideration of the Minister of Agriculture for the Dominion and by the Minister of Militia.

There is some talk of compulsory labor but you know as much about that as I do. We will do our best to assist, and we are formulating plans but without your co-operation, help and sympathy we can do little.

Another work we took up last year and devoted considerable attention to was the question of supplying farm tractors in different sections of the Province. We felt we could accomplish two things, that we could increase the amount of land prepared for seed over what would ordinarily be prepared, and we think we did materially increase the acreage sown with fall and spring wheat, by using the tractors scattered throughout the Province. We had the necessary organization through the District Representatives to take charge of the work in a proper and expeditious way. We had over one hundred and thirty tractors at work last fall and expect to continue that work this year and will perhaps increase the number of tractors where we feel that opportunity for real service offers.

I took the responsibility of expending that money, and we spent a substantial sum as you can readily understand. We wanted to help the farmers in every way we could and give them an opportunity of seeing what machinery of that kind could accomplish on a farm and to what extent it would take the place of the horse, as well as doing different things for which power is required around the farm. We purchased tractors of almost every type so that farmers could see these different tractors. We kept records and have information as to the cost of operation and other details that would enable one to come to a decision as to the advisability of purchasing a machine of that kind for himself. This is only one of many ways in which we have tried to solve problems on new lines during the past year.

I would like to say a word to the Experimental Union that is meeting here at the present time. It appears to me that the work of this Union is of the greatest importance and deserves every help, consideration and assistance that the Government can possibly give. Any person who has given thought to the question must realize the value of good seed as fundamental in agricultural production. The present need for increased production and the shortage of labor emphasize most plainly that we must use the very best seed to get the very best return for the work employed in growing grain. The Department has plans under way in connection with the Provincial Secretary's Department, not only those which I have mentioned, with respect to the farms under that Department, but we have other plans under way, looking to what we think will greatly aid in the improvement of seeds all over the Province of Ontario. We recognize that with

the improvement of the seed must come an increased educational campaign, in order that those growing seed will know the best methods to employ in connection with it and the best way to develop the seed. That campaign is one we will try to increase from year to year and from time to time, as circumstances demand.

This afternoon you heard a discussion as to what we were doing in developing and improving potatoes for seed in this Province. The facts showed clearly that we were not getting the results in the growing of potatoes in this Province that we should, and on that account the Department has spent a great deal of time in trying to find out why. I trust the efforts being made will be of real advantage to those engaged in the potato industry and to the people of the Province of Ontario.

You understand that the experts made a study all over the Province of the question and brought to bear all the scientific knowledge they possessed or could acquire, and then called together in a conference practical men engaged in the growing of potatoes. We have, therefore, had the benefit of an exchange of views between the scientific men and the practical men. That appears to be the line we must pursue if we would get the best results in connection with our departmental work in any line.

We must not minimize the importance of the subject we are talking about when we speak of field crops. Let me just point out that when we are dealing with the subject of field crops we are dealing with the very biggest industry in the Dominion of Canada. Recent figures issued by the Department at Ottawa for the year 1917 place the aggregate value of farm crops at $1,089,687,000, the first time that the field crops of Canada have ever gone over the billion mark, exceeding by over $200,000,000 any previous record we had ever made. You can perhaps estimate what that means when I point out to you that this would provide for double the amount of the great Victory Loan and leave a large balance to the good; and that it is five times the amount of the mineral production of the mines of Canada of which we are very proud. The value of the crops, of course, is due in a large degree to the high prices that prevail but it also indicates a very large volume in production. It shows the great power of Canada to assist in the struggle in which we are engaged, a struggle I know we are determined to continue until complete victory crowns our efforts.

The past three years have presented great difficulties to the farmer. Weather conditions have been abnormal and labor conditions more acute. If we compare the last three years of war, with abnormal weather conditions and shortage of labor, with the three years that preceded that time it shows an average yearly increase in the different departments as compared with the previous three, as follows:

Hay and clover (increase)	13,242 acres.
Field crops (exclusive of hay and clover)	85,670 "
Total field crops	98,912 "

This is aside from the quarter million acres utilized for pasture purposes which means for the three years of the war the farmers have taken off a total of nearly 300,000 more acres, in addition to the increased pasturage. This is a great tribute to the work of the farmers and also is an indication of the contribution of foodstuffs that Ontario is making at the present time.

It is a great privilege to me to-night to have before me so many of the students of the Guelph Agricultural College. Allow me to add a word of con-

gratulation on your choice of profession in life—it is the most independent and most important one there is in the country. And I congratulate you further on fitting yourselves by proper training and by proper study to fulfil the duties of that profession. I do not think there is any profession that brings greater or better reward for professional training than that of agriculture.

Years ago, when I was a lad, the prevailing habit of the father and mother was to pick out the boy who seemed bright and send him away to school to train for a doctor, lawyer or preacher; and the fellow who was plodding along and not so bright at books was, they thought, quite good enough for the farm. It was not felt that much schooling was required to enable him to follow in his father's footsteps and produce as much as could be obtained from the farm. The result was, boys were trained in a business for which they were not adapted and so to-day we have men in the pulpit, men in law and men who are doctors, who would make very good farmers but are very poor professional men; and we have men on the farm who would make excellent preachers, doctors or business men. One of the things we must give more attention to now is the study of how to guide the boy and assist him in finding his right calling and right profession in life. That is one of the things we are studying in the Educational Department with the idea of establishing bureaus in the different centres dealing particularly with business life, so that the boy will be able to get all the information possible with reference to business training or occupation that he may prefer. Training in large numbers affords advantages and disadvantages so we need to help the boy to form an opinion as to his future in a way that is intelligent and in a way that will be helpful. In years gone by we did not think so much of the necessity of expert knowledge in agriculture while now we all recognize it.

Nothing indicates more the prosperity of the country than the figures I gave of the output of the fields this past year. The country is a great reservoir from which the city is supplied and we find in any country, if the life of the city is not revived, renewed and invigorated from the country surrounding it, the moral tone and the Spartan life of that community deteriorates. So it is an important thing to the country itself, to the commercial interests of the whole land, that the moral stamina of the people should be very much improved. We should interest men in agriculture and develop it to the highest stage of science.

We all must recognize more and more the importance of science and scientific knowledge in every field of human activity, and of no field is this more true than in that of agriculture. Canada must not allow other countries to rob her of the benefit of science and technical knowledge in her agricultural and industrial activity. We have forcibly impressed on us what German organization, science and research have done in war, commerce and agriculture. Our sons at the front have proven, in the art of war, that there is nothing a German can do on the battle-front but what the Canadian can do more successfully and infinitely better. If that is true on the battlefield about the German of the subject which he has given the greatest attention, I am sure it is true of everything else. What the Germans can do in agriculture, Canadians can do better and with much greater success.

Since I entered public life, in fact long before, I took an interest in this College. As a citizen of Ontario I am proud of the splendid achievements of this College and Macdonald Hall. I think it is something, as a citizen of Ontario, of which I can justly boast. There is a tendency to magnify what is being done in other countries such as the United States and Great Britain, disregarding our own country. In all lines of activity pertaining to increased production, in war work, so far as agriculture is concerned, I do not believe that the work done in

Ontario has been excelled in any country since the war broke out. Just the other day I had proof of that. I received a letter from Ontario's Agent-General in London, England, asking for a large number of publications from the Department of Agriculture dealing with war subjects of different kinds. The letter concluded with these words: "We have read with great interest these publications and they are far in advance of anything we have yet been able to produce in Great Britain."

I would like to point out just what we are accomplishing here. President Creelman was in the United States a short time ago and was called upon to give an address to a large audience on Ontario's accomplishment in war work. So taken up were the people with Dr. Creelman's address that he would have been doing nothing else since that time, if he had accepted all the invitations that came from different parts of the United States to tell Ontario's story in war work. This is an indication that our work is appreciated away from home even if that is not always the case here.

We have a right to be proud of what we are doing and it is our object to build up this College until it is the greatest agricultural educational institution to be found anywhere in the world. We hope the day of peace will soon come when we will be able to make better advancement along the lines we have had most in contemplation.

We inaugurated auxiliary schools and farms in different sections of the Province. In Eastern Ontario we have an experimental farm at Kemptville where preliminary courses will be taken up this year. In the north we have another farm at Monteith where we are carrying on experimental work and are holding short courses. We hope these institutions will be feeders for this great central college which always will be great.

We are also trying to institute means whereby the knowledge obtained here will be spread with greater facility throughout the whole Province of Ontario. We want, however, the knowledge obtained at our College employed as far as possible on our own farms and in the development of our own agricultural resources in this Province.

It has been well said, "To educate without creating opportunity is to set a bonus upon the export of national ability." Opportunity without limit exists in this country for expert agriculturists. We must see to it that the expert and the opportunity are brought together so that the bright young men are kept in our own Province where there is a future in agriculture as great as in any country.

The world is moving at a tremendous pace in every branch of industry and in nothing is this more true than in agriculture. Great opportunity awaits you young men, and my wish and hope is that you may embrace these opportunities to your own advantage and to the advantage of your country.

The trying and momentous days through which we are passing are bound to leave a permanent mark upon the men and women who survive the war. The present struggle is bound to make a great change in the national spirit and outlook. As the war itself is the greatest in history, so will its consequences be the most prodigious. When the war comes to an end, and whether that end comes soon or be long delayed, we will be confronted with difficulties such as no people in the world have had to face. Upon all of us, and particularly upon those not wholly engaged in the conduct of the war, rests the obligation to think constantly, strenuously and soberly of the means and methods required to meet those difficulties. Upon you young men, the students of this College, possessed of

the imagination and vigor of youth and I hope, long life, is especially imposed a sacred duty in this connection. While our sons and brothers are fighting for the freedom and life of the nation, we must be thinking and planning out the best use to which that life and freedom can be put when they are safe once more.

Our sons, by their bravery, by their resourcefulness and heroism have made the name of Canada immortal. Generations yet unborn will live more perfect and nobler lives because we have lived so nobly and died so bravely. Thirty thousand of the best and bravest of the land sleep beneath white wooden crosses on that far-off battlefield. They died for liberty, for freedom, and for you and me. Their last moments were cheered by the thought that they died a very noble, heroic, courageous death, and their spirits call to us to-night from that far-off land to take up the weapons that death alone loosened from their hands and carry on the fight they so well began, until victory, final and complete, is achieved.

Our sons are gallantly keeping the first line trenches in France and Flanders; the second line of trenches is on the farms of North America. Let us see to it that we keep as truly and securely the second line trenches as our boys are keeping the first line trenches to-night. I know that the good people of the Province of Ontario, and the farmers above all, have given evidence of this and are not going to fail our gallant sons. If we are worthy, we will let no obstacle, no matter how great, or allow no sacrifice to stop us in providing the necessary foodstuffs to maintain the battle. Failure in the trenches here will be just as dangerous as failure in the trenches at the front. If we fail to grow the necessary foodstuffs, flour, beef and bacon that the men must have to maintain their strength to fight, hunger will soon do what the German guns have not and never will be able to accomplish—defeat the Canadian army.

We must not fail our sons, we must not fail our allies or the world, no matter what the sacrifice may be. You from the farm short of help, perhaps with the son that you looked to for the stay and comfort of your years on the fighting line—you are working twelve hours a day perhaps—and will say it is easy for me to talk, sitting in a soft armchair and comfortable office, about greater production when I know nothing of the difficulties, nothing of your troubles. True, I cannot understand and appreciate that, for you alone know what these difficulties are and you alone know the sacrifices you have been making. I know the response the farmers of Ontario have been making, and I appreciate that more than ever when attempting to look into the figures in connection with the remarks I am making to-night. I do know something of what hard work is on the farm and I know something of hard work myself, but while I do not appreciate all of your difficulties, I appeal to you with confidence to-night that no matter how great your efforts have been in the past, make them just a little greater this year in view of the responsibility that is upon us and in view of the crucial months and years that lie before us. No matter what we have accomplished in the past, there is always something higher to look to—"Thank God, there is always a land beyond." That is a great inspiration—there is something better, something higher, no matter how well we have done in the past.

And to-night, it is not for yourselves, not for the nation, but for your sons that are fighting on the far-flung battle-line that I look for the very best that is in you. That the thing is difficult, well nigh impossible, is no excuse for our failure to try. The men at the front are doing what seems to be humanly impossible every day. Whenever I see difficulties that seem insurmountable, trials that seem impossible, I think of the valor of our troops at the battle of Ypres and of the German rush on Calais when our soldiers thought of home and loved

ones and fought on and said as long as they lived the Hun would never set his foot on Canadian soil. They fought and were willing to die rather than to yield. When the testing time comes to us, let us remember we are all Britons and must play our part as men did at Ypres and on a hundred battlefields since.

You know conditions with reference to food. Only yesterday I received a cablegram from England wherein it stated that the situation was a serious one. The United States have already exported all their surplus grain. We have some 110,000,000 bushels of wheat left yet for export, all of which will have to be sent if the army is to be fed.

You know the difficulty of getting foodstuffs overseas. You ask if they cannot get foodstuffs elsewhere than in Canada. There are large reserves of foodstuffs in various countries but these are not available to the allies. Why are not foodstuffs in Australia available? The reason is that it is 12,500 miles from Australia to Liverpool, which is three or four times the distance from Halifax to Liverpool. It would take a vessel six weeks to take a load of grain from Australia to Liverpool as against a week or ten days from Canada. Then the tonnage necessary for the longer trip is not available. That is the practical lesson for to-day. What is the lesson for the future? If we take advantage of the present opportunity we will get an European market for our foodstuffs such as these other countries cannot obtain. This is a point we should not lose sight of. If we can get ships to take food from this country what will the result be in the prosecution of the war. The United States cannot put their full force for months, perhaps years, into the war because of a shortage of ships to transport the men, the food and the munitions necessary to keep a large army in the field.

These are facts we must consider. Now is the time for us to do our part here and study how we can produce foods that are of the greatest value over in Europe.

You are aware of the campaign the Department is now putting on. With your co-operation it will be a success and without it it will be a failure. We can do little more than bring the facts to your attention, to secure necessary statistics for you, but the success or failure depends on you.

We, as Canadians, have a wonderful country, and great agricultural possibilities surpassed in natural resources by no country in the world. We have a people not excelled by any people in the world. If we are to be true to ourselves we will establish a higher type of citizenship although the glory of our achievements has not been surpassed. As a people we have a long and glorious history; our forefathers travelled the chartless ocean long before steamships had been invented; they tramped through the forests and built cabins, started to cultivate the fields and laid the foundation for the civilization and prosperity that we now enjoy. We owe much to them, they ever faced dangers and difficulties with reliance and with courage and we must be worthy of the example they set. Then we have floating over us the grand old Union Jack, the symbol of liberty and peace for all who come beneath its fold. That was not established by chance but was the result of centuries of sacrifice and bloodshed by those who have gone before. Wherever the British flag floats we should be willing to perform sacrifices required to maintain that flag, and I feel, as never before, that we in this Province are looking matters fairly in the face. We understand, as perhaps we did not in the early days of the war, the great responsibilities we face. We realize this is a fight for life, and that it is either our enemies' life or ours. We appreciate that the place where we must conquer the enemy is in France and Flanders and that there is no other place we can set up a line and destroy the invader. The people

of this grand old Province may be proud of our record and prouder still after the war is over when the regiments have obtained the final and complete victory, when the last post is sounded for this cruel war, and when we as a people will be able to look back with pride on the greatest struggle that ever was. God grant it may be so.

WHAT THE MOTION PICTURE BUREAU HOPES TO DO IN ONTARIO AGRICULTURE.

S. C. Johnston, Director of the Provincial Motion Picture Bureau, Toronto.

Motion pictures have been used largely to please and entertain the dwellers in towns and cities by giving them the opportunity of seeing comedy, tragedy and romance pass rapidly before their eyes in the short space of perhaps one hour and a half. These motion pictures have not devoted any appreciable amount of attention to the development of what may be termed educational pictures. Pictures of scenes in foreign lands of strange people in peculiar surroundings and showing the habits of these people have to a large extent filled the demand for educational pictures.

Motion pictures, as an educator, have unlimited possibilities. In the past, education has consisted of verbal instruction, which some have stated was designed to give the average school boy as much discomfort from 9 o'clock until 4 as it was possible to do. The instruction of an individual by oral teaching has been proven an inefficient method as compared with demonstration and we find at the present time that in the case of agricultural education, demonstrations by means of charts and working models have been used and finally, to a great extent, discarded in favor of what may be termed a field demonstration where actual objects of agricultural work are used to bring out certain points to those interested. While these field demonstrations are considered by the leading agricultural educators a very effective way of bringing home important truths, they, too, are limited by certain conditions which cannot be overcome. It is conceded by all that in order to provide a farmer with the reason why certain work should be done according to certain stereotyped rules, he must be shown how, and this will largely explain the "why" of the operation. Field demonstrations of necessity have to be carried on during the summer months when the farmer is engaged in general farming operations, and he has not the time to attend meetings which are held for the purpose of showing how these operations are carried on. During the winter months when many of the farmers of the Province are not quite so busily engaged they have the time to attend meetings. The agricultural films which have been prepared under the direction of the leading agricultural experts of the Province have been so constructed that they visualize field demonstrations in such a manner that the farmer may practically attend a meeting which was held during the summer previous and may grasp the information and attempt to put it into practice during the following season's work. These films will enable those favoring field demonstrations to carry on this particular form of agricultural education during the winter months and in two or three localities at the same time. The added feature is the fact that the film may be stopped at any picture and a complete detailed talk or discussion may be given about some one operation which is included in this particular film. The motion picture fills the place

which up to the present time has been quite vacant, in that it visualizes spoken or written text. A picture knowledge is understood at once and interpreted quickly by all. For this reason many people have called motion pictures the universal language and some have gone even further and have stated that the motion picture will visualize education, agricultural or otherwise.

Some of the more scientific phases of agriculture are somewhat hard to explain to an audience who, through no fault of their own, are not quite as conversant with the technical language used as is the instructor. It has been found a difficult matter by many of our agricultural speakers to interest an audience by explaining certain phenomena which takes place in the growth and development of agricultural products. Oftentimes minute organisms so important in agricultural work of necessity have to be described in words which to the layman are simply so much Greek. The speaker is at a loss to know what language to use to explain those things which are so common to him through constant work with them and the audience is at a loss to know what the speaker is trying to tell them through having never had the opportunity of seeing anything relating to what they are being told of. The motion picture will supplement the speaker's words and make clear to the audience just what has been told them and will relieve the speaker of much anxiety and at the same time will help to create a receptive mind in the individuals of the audience.

In Ontario the development of agricultural knowledge has been limited to a comparatively small quota of the population of the Province. This is true also in all other forms of technical work. Only a small number of people make a life study of certain work and as a result become authorities on their own particular subjects. The great number of us have to depend on these men or women to show us how the important truths they have proven to be right can be applied in the business of farming. We may be anxious to find the short cut in producing animals, grains or fruits with a little less labor and at less expense—one man in the Province may have this information. Many more of us can see how this man performs this operation if we are given the privilege of seeing a motion picture of this man actually doing this particular piece of work. If ten men and women in each county in Ontario can have the opportunity of seeing this in a week or a month even that information is distributed in a vivid form far quicker than were this expert to attempt to personally show these audiences the point he wishes to bring to their attention. This work the Motion Picture Bureau hopes to accomplish.

It is generally conceded by those engaged in spreading agricultural information that the indifferent element in rural communities is not reached. The farmer who knows he needs expert knowledge and instruction and yet makes no personal effort to avail himself of the agencies of the Department of Agriculture is more or less a detriment to this Province and he should be reached by some manner or means and given the help which he requires. It is quite apparent that this information cannot be forced upon him, neither can he be forced to make use of the information when it is given him. Wherever motion pictures have been used they have proven to have a certain attraction which draws people to see them. It is hoped that to some degree at least the use of motion pictures in rural communities will tend to engage the attention of those farmers and their wives and families who can best be benefited by the expert information and knowledge which is available for them.

At many agricultural meetings in recent years the fact is apparent that the rural population is gradually becoming less and less each year owing to the younger generations turning to the cities and towns. One of the reasons for this

has been given by those who study this problem that the rural communities provide practically no entertainment as compared with that which may be found in the cities. It is hoped by the Bureau that the motion picture films will become an agency for the promotion of community social evenings at which those living in the district will have an opportunity of meeting one another and having some form of entertainment containing a certain amount of educational material which will be of a varied nature at each meeting suitable to any or all of those present.

Each District Representative of the Department of Agriculture is being equipped with a motion picture machine. The Bureau of Motion Pictures will shortly commence to supply films for showing in all parts of the Province. The films deal with Ontario subjects and have been prepared with the assistance of the leading agricultural experts of the Province. They deal with subjects of importance in the rural district such as the "Conformation of Dairy and Beef Animals," "The Heavy Draught Horse," "Growing Mangel Seed," "The O.A.C. No. 72 Oat," "Potato Growing," "Incubation," "Rearing of Chickens," "Killing and Dressing of Poultry," "Pruning Apple Trees," "Box Packing Apples," "Making Butter," besides possibly some forty more agricultural subjects. Films dealing with details of the most up-to-date road construction will also be made available for each county in the Province and an audience will be given the opportunity of spending evenings discussing the possibilities of road construction or improvement in their locality. A large number of films have been prepared showing the extent of Northern Ontario, and the wonderful agricultural possibilities of the great Clay Belt in this part of the Province. Pictures showing actual conditions of farmers in the settled districts have been prepared with a view to familiarize those of us living in Old Ontario with the conditions at present prevalent in Northern Ontario. These films will show that crops grown in Northern Ontario equal and in some cases surpass those grown in Old Ontario and many of the conflicting stories which have been heard in Old Ontario regarding the possibilities of this part of the Province as an agricultural district will be given a quietus by motion picture films.

The mineral wealth and the forest wealth of the Province will be more readily grasped in Old Ontario after having viewed the motion pictures prepared for them.

The Motion Picture Bureau hopes to become an agency for the betterment of agriculture by spreading the gospel of better agriculture through the use of the motion picture film. It hopes to create a feeling of pride among the members of the rural communities in the fact that each and everyone is carrying on his or her work in the most efficient manner toward the cause of general good in the Province.

REPORT

OF THE

Stallion Enrolment Board

OF

ONTARIO

1917

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE)

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1917

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

To His Honour SIR JOHN STRATHEARN HENDRIE, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned begs to present for the consideration of Your Honour the Report of the Stallion Enrolment Board for 1917.

Respectfully submitted,

W. H. HEARST,

Minister of Agriculture.

TORONTO, 1917.

CONTENTS

	PAGE
Ontario Stallion Enrolment Act	6
Regulations of the Ontario Stallion Act	8
Canadian Books of Record	14
Recognized Foreign Records for which there is no Canadian Association	14
Transfer fees in the Canadian National Live Stock Records, Ottawa	15
Facsimile of Registration Certificates issued by the Canadian National Records	16
Registering of Stallions in Scotland	17
List of Provinces having Stallion Laws	17
Summary of Enrolment by Counties for the years 1913-1917	18
Summary for the Province of Ontario showing by Counties the number of the different breeds of stallions enrolled	19
Enrolment by Counties	20
Premiums for Stallions	90
Notes regarding Inspection	91
Inspection Routes for the Fall of 1917	92

ONTARIO STALLION ENROLMENT BOARD

LIEUT.-COL. R. MCEWEN, London, Ont., *Chairman.*

JOHN GARDHOUSE, Weston Ont.

F. C. GRENSIDE, V.S., Guelph, Ont.

PETER CHRISTIE, Manchester, Ont.

R. W. WADE, Parliament Buildings, Toronto, Ont., *Secretary.*

STALLION ENROLMENT BOARD

1917

To the Honourable Sir William H. Hearst,

Minister of Agriculture for Ontario.

Sir,—The Ontario Stallion Enrolment Board has the honor to transmit herewith its report for the stallion year ending July 31st, 1917.

It will be observed that the number of stallions enrolled for the year 1917 was 2,433, of which 1,793 were pure breds and 640 grades. This is a decrease in the number of stallions enrolled in the previous year, of 298; the greater part, however, of the decrease being in the lesser number of grades enrolled in 1917, there being only 26 per cent. grades of the total number of horses enrolled. Of the 1,793 pure breds enrolled 80 per cent. belong to the heavy draught breeds.

The law affecting sound grades comes into effect the 31st of July, 1918, so that after that date none but pure bred horses will be granted Enrolment Certificates.

Owing to the fact that a number of stallion owners do not present their horses at the regular inspection time, the Board is of the opinion that where stallion owners have failed to present their horses at the regular inspection, they will not be granted a later inspection unless the full cost of such an inspection is met.

It has also been found necessary to undertake a number of prosecutions where men have wilfully violated the provisions of the Ontario Stallion Act and as the Act has now been in force since 1913, and as the Reports contain the provisions of the Ontario Stallion Law, every stallion owner has had ample opportunity to acquaint himself with the provisions of the Act and to comply therewith.

The Board desires to call attention to the change in pure bred enrolment certificates to be issued for 1918, dividing the sound pure breds into Approved A. 1 and Passed Form 1 classes. The Board notes with gratification that the Department is providing for premiums to be given to those horses which from their soundness, correct conformation and outstanding breed character, are considered worthy to receive such premiums. It is hoped that the premium system as instituted this present year will have a tendency to maintain a high quality of horses for service in the Province and will prove some encouragement towards the importation and keeping in the Province of the highest type of stallions.

All of which is respectfully submitted.

Lieut.-Col. R. McEwen, *Chairman.*
R. W. Wade, *Secretary.*

Toronto, September 4th, 1917.

"The Ontario Stallion Act"

Chap. 249, R.S.O. 1914.

As amended by 4 Geo. V, chap. 44 and 5 Geo. V, chap. 20, sec. 22.

1. This Act may be cited as THE ONTARIO STALLION ACT.

2. For the purpose of this Act,

(1) The Lieutenant-Governor in Council upon the recommendation of the Minister of Agriculture shall appoint four persons who, with the Director of the Live Stock Branch of the Department of Agriculture, shall constitute the Stallion Enrolment Board, hereinafter called "The Board."

(2) The Director of the Live Stock Branch of the Department of Agriculture shall be the Secretary and Executive Officer of the Board.

3. The Minister of Agriculture may from time to time appoint competent persons to act as inspectors under the direction of the Board.

4. The appointed members of the Board and the Inspectors shall receive such per diem remuneration and allowance for necessary travelling expenses as may be fixed by the Lieutenant-Governor in Council out of monies voted by the Assembly.

5.—(1) No person shall stand, travel or offer for use or sale any stallion unless and until the name, description and pedigree of such stallion has been enrolled, and such stallion has been inspected in accordance with the provisions of this Act and a certificate of such enrolment and inspection has been issued as hereinafter provided.

(2) For the purposes of enrolment the owner of every stallion shall submit to the board all evidence of the breeding and ownership of such stallion.

(3) The owner of every stallion shall submit the same for inspection under this Act at such times and places as may be fixed by the board, who shall give notice thereof in such manner as may be prescribed by the regulations. Persons having stallions inspected shall submit to the board such evidence of the breeding and ownership of the stallion as may be required by the regulations and a report of such inspection shall be made to the Board.

(4) Upon the receipt of the report of inspection and the evidence of breeding and ownership and upon payment of the fee, the Board shall issue a certificate accordingly, and all certificates of enrolment and inspection shall be renewed annually in accordance with the regulations and upon payment of the prescribed fee.

6.—(1) The Board shall keep a register for the enrolment of stallions which register shall be kept in such form and shall contain such particulars, including the report of inspection, as may be prescribed by the regulations and the certificate shall be issued in accordance therewith.

(2) Every stallion shall be enrolled in the name of the owner at the time of the enrolment, and in case of a change of ownership the enrolment shall be deemed to be cancelled unless within thirty days thereafter evidence of the change of ownership satisfactory to the Board has been furnished to the Board, in which case a transfer certificate shall be issued by the Board.

(3) When a certificate of enrolment has been issued after the first day of August in any year the enrolment and certificate of enrolment and inspection of the stallion shall remain in force until the 31st day of December in the next succeeding year, and when the enrolment has been made before the first day of August in any year the enrolment and certificate thereof shall remain in force until the 31st day of December next following.

(4) When a stallion has reached the age of seven years the first inspection thereafter shall be the final inspection and the enrolment made on the report of such final inspection shall continue to form part of the enrolment and a certificate shall be granted in accordance therewith on each subsequent renewal of such enrolment.

(5) In the case of any other stallion the report of inspection shall be valid for two years only except as provided in subsection 3.

7. On and after the first day of August, 1916, no grade stallion having any of the diseases or malformations mentioned in the regulations passed in pursuance of this Act shall be allowed to stand, travel or be offered for service in the Province of Ontario and from and after that day no fees shall be collectible for the services of such stallion.

8. On and after the first day of August, 1918, no "grade stallion" as defined in the said regulations shall be allowed to stand, travel or be offered for service in the Province and, on and after such day, no fees shall be collectible for the services thereof.

9. In case of dissatisfaction the owner of any stallion may appeal to the Board from any inspection, and upon the owner depositing with the Board an amount sufficient in the opinion of the Board to cover the expenses of an additional inspection the Board shall direct a further inspection which shall be final.

10. The Board upon consideration of the report of the Committee and after the inspection of the papers supplied relating to the breeding and ownership of the stallion, and upon payment of the fee fixed by this Act, shall make such enrolment of the name, description and pedigree of the stallion in the register herein provided for as may be deemed warranted and shall issue a certificate in accordance with such enrolment to the owner of the stallion.

11.—(1) The certificate of enrolment and inspection of any stallion shall form a prominent part of any newspaper or other printed advertisement issued to advertise such stallion.

(2) Every poster issued shall contain a copy of the certificate of enrolment printed in bold face and conspicuous type and shall not contain any illustrations, pedigree or other matter which is untruthful or misleading.

(3) Where no posters are used to advertise a stallion, the owner of the stallion shall exhibit to the owner of each mare, at the time of service, if demanded, the original enrolment certificate issued for such stallion.

12.—(1) The fees to be paid to the Board before the issue of any certificate shall be:

For enrolment	$2.00
For inspection	3.00
For renewal of enrolment	1.00
For transfer certificate	.50

(2) The fees received by the Board under this Act shall be paid over to the Treasurer of Ontario for the use of the Province.

13. The Board, subject to the approval of the Lieutenant-Governor in Council, may make such regulations as may be deemed proper and necessary for the better carrying out of the provisions of the Act.

14. Every person who is guilty of a contravention of any of the provisions of this Act shall incur a penalty of not less than $25, nor more than $100, recoverable under The Ontario Summary Convictions Act.

REGULATIONS PASSED UNDER THE AUTHORITY OF SECTION 14 OF "THE ONTARIO STALLION ACT."

1. Meetings at regular intervals may be arranged by the Board by resolution and shall be known as regular meetings. Special meetings of the Board may be held upon notice by letter addressed by the Secretary to the home address of each member of the Board and regularly posted in Toronto at least five days previous to the meeting. A meeting may be held at any time without notice where all the members of the Board are present or signify by letter their consent to the holding of such meeting.

2. At any meeting whether regular or special, three members shall form a quorum for the transaction of any business of the Board.

3. A chairman shall be appointed who shall have the right to vote on any question before the Board, and in case of a tie, shall have a second or casting vote.

4. Application for enrolment shall be made in such form as the Board may prescribe, said application shall be accompanied by the necessary fees.

(a) The following shall be included as part of the application: "In consideration of the certificate to be issued and delivered to me in pursuance of this application, I hereby agree that I will deliver the same up to the Board upon demand, and will, in case of a sale of the above named stallion, execute a transfer of the said stallion to the purchaser in the form prescribed by the Board and thereupon deliver the said certificate with said transfer so executed, to the Board or to the purchaser as the case may require. It is further agreed that the certificate shall always be the property of the Board and subject to their control and direction at any time."

5. A report shall be issued by the Board annually, showing the names and addresses of the owners of stallions enrolled, the number of stallions and such particulars regarding the stallion as the Board may decide upon, and such other matters as the Board consider advisable.

6. Each certificate shall be issued under the seal of the Board authenticated by the signatures of the Chairman and the Secretary, who are authorized to issue the same in accordance with the decisions of the Board.

7. In case of the transfer of a stallion a new certificate shall be issued in the name of the transferee, and except in cases of dispute as to ownership, the Chairman and Secretary are, where a transfer of ownership has taken place, authorized to issue new certificates without reference to the Board, provided the regulations of the Board dealing therewith have been complied with. If a dispute as to ownership arises subsequently to the issue of the new certificate, the Board may recall such new certificate.

8. The Board may appoint a Vice-Chairman, who during the absence of the Chairman shall have all the powers and perform all the duties of the Chairman.

9. Each certificate issued shall, as the case may require, be in one of the following forms:

Inspection is necessary every second year until the horse has passed seven years, but this Certificate must be renewed each year.

APPROVED Enrolment No. FORM A 1

Certificate of Enrolment and Inspection

OF THE

PURE BRED

STALLION

Registered in the Stud Book as No.

Owned by of Foaled in

has been enrolled under THE ONTARIO STALLION ACT. Inspected on the day of

19 , and found to be sound, of good conformation and an animal typical of the breed.

THE ONTARIO STALLION ENROLMENT BOARD.

Chairman Secretary

Dated at Toronto, Ontario, the day of 19

GOOD UNTIL DECEMBER 31st, 1918.

Application for Renewal and Transfer on back of Certificate.

Inspection is necessary every second year until the horse has passed seven years, but this Certificate must be renewed each year.

PASSED Enrolment No..... FORM 1

Certificate of Enrolment and Inspection

OF THE

PURE BRED

STALLION

Registered in the Stud Book as No.

Owned by of Foaled in

has been enrolled under THE ONTARIO STALLION ACT. Inspected on the day of

19 , and Passed.

THE ONTARIO STALLION ENROLMENT BOARD.

Chairman Secretary

Dated at Toronto, Ontario, the day of 19

GOOD UNTIL DECEMBER 31st, 1918.

Application for Renewal and Transfer on back of Certificate.

Inspection is necessary every second year until the horse has passed seven years, but this Certificate must be renewed each year.

DEFECTIVE Enrolment No..... FORM 2

Certificate of Enrolment and Inspection

OF THE

PURE BRED

STALLION

.....Registered in the..... Stud Book as No.....

Owned by..... of ..... Foaled in .....

has been enrolled under THE ONTARIO STALLION ACT Inspected on the..... day of .....19...., and found to .....

THE ONTARIO STALLION ENROLMENT BOARD.

....

Chairman Secretary

Dated at Toronto, Ontario, the ..... day of ..... 19.....

GOOD UNTIL DECEMBER 31st, 1918.

Application for Renewal and Transfer on back of Certificate.

Enrolment No.____ FORM 3.

Certificate of Enrolment and Inspection

OF THE

GRADE

STALLION

.....Color and markings .....

.....

Owned by..... of .....

Foaled in....., has been enrolled under THE ONTARIO STALLION ACT, and was Inspected on the ..... day of ..... 19...., and found to be free from the Malformations and Diseases named in the Regulations under the said Act.

THE ONTARIO STALLION ENROLMENT BOARD.

....

Chairman Secretary

Dated at Toronto, Ontario, the.....day of..... ....19....

GOOD UNTIL JULY 31st, 1918.

Read carefully information given on the back of this Certificate.

10. After the first day of August, 1916, no certificates in form 4 shall be issued.

After the first day of August, 1918, no certificates in either form 3 or form 4 shall be issued.

11. For the purposes of this Act—

(*a*) A pure-bred stallion shall be considered to be one registered in one of the records affiliated with the Canadian National Live Stock Recorders, or in case there is no such record for the breed, in one of the records recognized as authentic by the Canadian National Live Stock Record Board.

(*b*) A grade shall be considered to be any other stallion.

12. The following shall be considered diseases or malformations, as the case may be, under these regulations: Bone spavin; curb, when associated with a formation of hock which predisposes to curb; bog spavin, when associated with a formation of hock which predisposes to bog spavin; ring bone; string-halt; side bone; roaring or whistling; periodic ophthalmia; navicular disease; and radical defect or defects or general defectiveness of conformation rendering the stallion unsuitable for use in the stud.

13. In the case of a pure-bred stallion of a breed for which there is a Canadian Record the Board shall as evidence of breeding and ownership require a certificate of registration issued by the Canadian National Live Stock Record Board showing the applicant for enrolment to be the recorded owner, and in the case of a pure-bred stallion of a breed for which there is no Canadian Record, a Certificate of Registration of a foreign record recognized as reliable by the Canadian National Live Stock Record Board, showing the applicant for enrolment to be the recorded owner. In the case, however, of certificates of such foreign records the Board may accept such evidence of ownership as to the Board seems proper. Provided that in case of a dispute as to ownership or if a vendor for any reason refuses or is unwilling or unable, or neglects to execute a proper transfer, the Board may accept such evidence of ownership as to it seems sufficient and issue a certificate accordingly.

14. In the case of grades, a signed statement shall be submitted to the Board by the owner, giving such information as he may be able to give regarding the breeding, and he must make a further statement that such information, to the best of his knowledge, is correct, and that he is the owner of the said stallion. In the case of a dispute as to ownership, the Board shall have power, upon such evidence as the Board may think proper, to determine the matter for the purpose of issuing the enrolment certificate.

15. The certificate issued by the Board shall be the property of the Board, and each applicant for a certificate of enrolment or transfer shall be required in his application to agree to surrender to the Board upon demand the certificate to be issued, and in case of the sale of the stallion mentioned in such certificate, to agree to sign a transfer to the purchaser in the form prescribed by the Board. The Board shall have such status and power as may be necessary to enforce such agreements in any court of competent jurisdiction.

16. The purchaser of an enrolled stallion shall, upon the sale, obtain from the vendor the certificate of enrolment and inspection with a transfer endorsed thereon in the prescribed form and signed by the vendor (who, if the law and these regulations have been complied with will be the owner according to the record of enrolment), and forthwith transmit the same to the Secretary of the Board. The Board will, upon receipt of the same, properly signed, issue a new certificate in the name of the purchaser.

17. The Seal, an impression of which appears in the margin hereof, shall be the Seal of the Board.

18. The Board may cancel any certificate of enrolment which has been issued by it upon representation subsequently proved to its satisfaction to have been incorrect.

19. A notice of the time and place of inspections may be given by advertisement in such local papers as may be designated by the Board in at least two issues thereof.

20. Each owner of a stallion shall transmit to the Secretary of the Board a copy of every poster or other advertisement issued or used for the purpose of advertising such stallion forthwith after the issue thereof. In default of compliance with this regulation, the Board may cancel any certificate issued for such stallion.

21. The Register of Enrolment shall be kept in a book and shall be in the form and contain the particulars indicated by the following form:

REGISTER OF ENROLMENT

File No. .....Enrolment No. .....Breed .....

Name of Stallion .....Registration No. .....

Color . . . .Year of Birth .....

Inspected by .....Date . . . .

Report .....

Inspected by .....Date . . . .

Report . . . .

Inspected by .....Date . . . .

Report . . . .

Inspected by .....Date . . . .

Report . . . .

Cert.	Date Issued.	Date of Sale.	Owner.	Address.	County.

The Board may, from time to time, alter the above form, and vary or add to the above indicated particulars.

22. Notice of cancellation of a certificate shall be in writing, signed by the Secretary of the Board, and regularly posted in Toronto by registered post, addressed to the owner at his address, according to the record of enrolment, and cancellation, except as provided by section 6, subsection 2 of the Act, shall be deemed to take place at the end of the tenth day after the day upon which such notice was so posted.

23. Where a certificate is cancelled by reason of failure to comply with subsection 2 of section 6 of the Act, or for other cause, the Board may issue a new certificate to the owner upon his application.

24. All stallions imported to the Province shall be inspected within two months from date of arrival. Importers shall notify the Board immediately upon the arrival of importations, and the Board shall send inspectors to the stable of the importer or such other place as may be agreed upon within said two months from date of arrival.

25. (a) In case of necessity, where an application cannot be dealt with immediately by the Board, the Chairman and Secretary may issue an interim certificate, which shall be valid for all purposes under the Act, until the application is dealt with by the Board, and which shall be in the following form:

ONTARIO STALLION ENROLMENT BOARD.

This is to certify that .....

of.....has applied for enrolment of the.....

Stallion .....and that such application is being considered

by the Board.

....., Secretary. .....Chairman.

Toronto,

..... 19....

(*b*) Interim certificates may be issued for a certain specified time.

CANADIAN BOOKS OF RECORD-

Name of Breed.	Book of Record.	Name of Association.
Clydesdale.....	Clydesdale Stud Book of Canada ..	Clydesdale Horse Association of Canada.
Hackney.....	Canadian Hackney Stud Book	Canadian Hackney Horse Society.
Shire.....	Canadian Shire Horse Stud Book .	Canadian Shire Horse Association.
Percheron.....	Canadian Percheron Stud Book ..	Canadian Percheron Horse Breeders' Association.
Thoroughbred...	Canadian Thoroughbred Stud Book	Canadian Thoroughbred Horse Society.
Belgian Draft...	Canadian Belgian Draft Stud Book	Canadian Belgian Draft Horse Breeders' Association.
French-Canadian	French-Canadian Horse Breeders' Stud Book	French-Canadian Horse Breeders' Association of Canada.
Shetland, Welsh, New Forest, Polo and Riding, Exmoor and Hackney Ponies	Canadian Pony Stud Book	Canadian Pony Society.
French Coach...	Canadian French Coach Stud Book	Canadian French Coach Horse Breeders' Association.
Suffolk Horse..	Canadian Suffolk Horse Stud Book	Canadian Suffolk Horse Society.
Standard Bred.	Canadian Standard Bred Stud Book	Canadian Standard Bred Horse Society.

RECOGNIZED FOREIGN RECORDS FOR WHICH THERE IS NO CANADIAN ASSOCIATION.

Name of Breed.	Book of Record.	Name of Association.
Cleveland Bay..	Cleveland Bay Stud Book	Cleveland Bay Horse Society of Great Britain and Ireland, Numthrope, R.S.O., England.
Yorkshire Coach	Yorkshire Coach Horse Stud Book.	Yorkshire Coach Horse Society of Great Britain and Ireland, Bolton Perdy, R.S.O., England.
Morgan.....	American Morgan Register	American Morgan Register Association, Middlebury, Vt., U.S.A.
Saddle Horse...	American Saddle Horse Register ..	American Saddle Horse Breeders' Association, Louisville, Ky., U.S.A.
German Coach..	Ostfriesisches Stutbuch	Landwirthschaftlichen, Hauptverein fur Ostfriesland, Norden, Germany.
	Stutbuch der Munsterlandisch-Oldenburgischen Geest	Zuchterband des Sudlichen Zuchtgebietes, Oldenburg, Germany.
Oldenburg.....	Oldenburger Stutbuch	Verband der Zuchter des Oldenburger elegaten schweren Kutschpferdes, Oldenburg, Germany.
Holstein Coach..	Gestutbuch der Holsteinischen Marschen	Verband der Pferdezuchter in den Holsteinischen Marschen, Holstein, Germany.
Hunter.....	Hunter Stud Book	Hunter's Improvement Society, 12 Hanover Square, London, Eng.

The above are the various Horse Associations, registration certificates from which are necessary before a stallion can be enrolled as a pure-bred.

Not only must the registration certificate from the above Associations be furnished, but the registration certificate must show that the person making application for the enrolment of a stallion is the recorded owner.

In buying a stallion, the buyer should make it one of the articles of agreement that the animal purchased shall be recorded in his (the buyer's) name in the stud book established for that particular breed of horse.

The fees charged by the various Horse Associations for the transfer of ownership in the Canadian National Live Stock Records at Ottawa are given below:—

	Member.	Non-Member.
Clydesdale	$0 50	$0 50
Hackney	1 00	2 00
Shire	0 50	0 50
Percheron	0 50	0 50
Thoroughbred	1 00	2 00
Belgian Draft	0 50	0 50
French-Canadian	0 25	0 50
Canadian Pony Society	0 50	0 50
French Coach	0 50	0 50
Suffolk	0 50	0 50
Standard Bred	0 50	1 00

The reason that horses to be enrolled as pure-breds must be recorded in the name of the owner is to ensure the owners of mares that the certificate of service furnished by the stallion owner will be accepted by the Canadian National Live Stock Records at Ottawa when the owner of the mare makes application to register the progeny.

CANADIAN NATIONAL LIVE STOCK RECORDS

CLYDESDALE HORSE ASSOCIATION OF CANADA

Incorporated under the Act respecting Live Stock Record Associations at the Department of Agriculture, Ottawa, Canada.

APPLICATION FOR TRANSFER OF OWNERSHIP

I HEREBY CERTIFY, that on the.....day of.....191....

I sold to .....P.O.....

County.....Province.....the following described CLYDESDALE

Name of Animal..... Stud Book No. [.....]

I HEREBY AUTHORIZE the Transfer of Ownership as above on the Records of THE CLYDESDALE HORSE ASSOCIATION OF CANADA.

Date of Delivery..... Signature of Seller.....

In case of death Legal Representative must sign.

N.B.—This application must be filled out in ink and at once forwarded, with necessary remittance, together with Certificate of Registration, to the Accountant, Canadian National Live Stock Records, Ottawa, Canada.

THE FOLLOWING ARE SAMPLES OF CANADIAN REGISTRATION, SERVICE AND TRANSFER CERTIFICATES.

CANADIAN NATIONAL LIVE STOCK RECORDS

CLYDESDALE HORSE ASSOCIATION OF CANADA

Incorporated under the Act respecting Live Stock Record Associations at the Department of Agriculture, Ottawa, Canada.

Certified Copy of Pedigree Recorded in the Clydesdale Stud Book of Canada

If a change of ownership occurs, this certificate with application for transfer and transfer fee should immediately be forwarded to Record Office.

MACQUEEN (imp) [462] (5200)

Bay, white hind legs, grey fore legs, white on face; foaled 15th May 1885. Bred by Peter Kerr, Bellamack, Castle Douglas, Scotland, imported 1886 by and property of Graham Bros., Claremont, Ont.

(See other side for transfer to next owner.)

SIRE Macgregor (1487)

SIRE OF SIRE Darnley (222)

DAM OF SIRE

DAM Bet of Bellamack (5506)

SIRE OF DAM Lothian Tam (1211)

DAM OF DAM

THIS IS TO CERTIFY that the above pedigree is on record in volume Approved Typed by

For Minister of Agriculture. Registrar.

OTTAWA, CANADA.

This slip, when presented with and attached to the certificate, will be authority for the agent of the railway company to waybill at the reduced rates agreed to with the Dominion Department of Agriculture. This slip must be detached from the certificate by the agent and forwarded with the waybill.

CLYDESDALE R. R. SHIPPING VOUCHER No. 3.

Age.....

Name of Animal.....Certificate No.....

Signature of Shipper..... P.O.....

REGISTERING OF STALLIONS IN SCOTLAND

The Board of Agriculture for Scotland has instituted a register of stallions, which have passed a veterinary examination. As a result of this register, the smaller farmers are better able to obtain the use of sound sires. The register contains the names of stallions which have been examined by the veterinarians appointed by the Board and the names and addresses of the owners. No animal whose name does not appear in this register is eligible to receive aid from the government funds.

In order for a stallion to be admitted or retained in the register, it must be annually certified to be sound and suitable for breeding purposes and to be free from the following diseases and defects:—Cataract, Roaring, Whistling, Ringbone (high and low), Sidebone, Bone Spavin, Navicular Diseases, Shivering, Stringhalt, Defective Genital Organs.

LIST OF PROVINCES HAVING STALLION LAWS

Province.	Act Effective.
Alberta	1904
British Columbia	1907
Manitoba	1906
New Brunswick	1917
Nova Scotia	1913
Ontario	1913
Prince Edward Island	1913
Saskatchewan	1903

SUMMARY OF ENROLLED HORSES FOR THE YEARS 1913-1917.

County.	1913		1914		1915		1916		1917	
	Enrolled Horses.	Grades.	Enrolled Horses.	Grades	Enrolled Horses	Grades.	Enrolled Horses.	Grades.	Enrolled Horses.	Grades.
Brant	28	11	44	16	43	15	35	11	41	10
Bruce	103	35	114	41	99	28	91	30	95	21
Carleton	65	31	76	30	70	21	54	15	60	17
Dufferin	51	11	58	11	57	12	51	11	48	6
Dundas	44	19	41	22	43	18	38	16	29	10
Durham	60	18	63	14	67	14	52	8	43	3
Elgin	65	32	75	31	76	22	46	9	50	11
Essex	69	29	91	30	94	29	76	26	61	12
Frontenac	31	19	42	25	42	27	38	22	35	19
Glengarry	34	14	48	23	54	24	48	16	43	13
Grenville	37	21	32	16	28	13	21	8	21	9
Grey	108	25	121	29	118	26	94	19	87	14
Haldimand	47	24	50	21	54	20	50	16	38	13
Halton	27	7	29	6	25	5	32	8	30	5
Hastings	82	61	87	59	72	41	65	34	59	23
Huron	112	31	142	41	130	29	123	30	114	26
Kent	130	40	136	34	133	34	122	36	89	20
Lambton	113	25	134	40	126	29	108	24	88	16
Lanark	58	22	76	31	71	21	61	20	56	19
Leeds	50	32	52	31	40	23	25	13	25	12
Lennox & Addington	45	30	42	22	33	14	29	10	29	14
Lincoln	27	14	33	14	31	16	15	7	16	4
Middlesex	128	36	158	43	154	39	142	32	112	18
Norfolk	57	18	60	20	53	16	40	15	39	17
Northumberland	50	20	51	16	48	18	53	17	43	12
Ontario	101	16	108	21	124	25	96	12	95	12
Oxford	77	25	86	27	90	24	77	18	57	15
Peel	52	9	72	8	70	8	65	6	47	4
Perth	81	16	102	21	105	24	86	14	67	10
Peterboro	46	22	46	22	52	24	44	20	50	16
Prescott	46	34	57	39	42	29	37	25	27	14
Prince Edward	29	17	27	13	36	18	26	15	28	9
Renfrew	85	35	91	42	78	33	55	26	62	28
Russell	39	18	52	32	38	24	33	20	34	17
Simcoe	139	41	157	52	145	47	120	32	100	23
Stormont	32	18	35	18	27	14	23	14	23	16
Victoria	48	15	66	23	62	23	70	22	68	15
Waterloo	48	13	59	22	54	15	47	11	45	10
Welland	17	7	28	16	28	12	26	9	22	6
Wellington	104	26	117	27	115	30	87	17	82	16
Wentworth	50	25	60	27	56	17	35	9	30	10
York	119	25	148	29	157	27	135	20	121	16
New Ontario	12	3	16	5	120	67	129	75	110	57
Outside points	14	3	19	8	17	7	21	8	14	2
Totals	2,760	993	3,201	1,118	3,177	1,022	2,731	826	2,433	640
Percentage of Grades	36%		34½%		32%		30%		26%	

SUMMARY FOR THE PROVINCE OF ONTARIO SHOWING BY COUNTIES THE NUMBER OF THE DIFFERENT BREEDS OF STALLIONS ENROLLED DURING 1917.

County.	Clyde.	Per.	Shire.	Bel. Dr.	Fr. Can.	Suff.	Stan. Br.	Thor.	Hack.	Fr. Ch.	Ger. Ch.	Ponies and Morgans.	Total Pure Breds.	% of Pure Breds.	Grades.	Total Horses.
Brant	11	8	1	2	..	1	3	..	3	..	....	2	31	76	10	41
Bruce	48	8	1	2	1	..	9	1	2	2	....	.....	74	78	21	95
Carleton	30	3	1	1	..	..	7	..	1	..	....	.....	43	72	17	60
Dufferin	34	3	....	..	..	..	4	1	..	..	....	.....	42	87	6	48
Dundas	12	2	....	..	..	..	2	1	2	..	....	.....	19	66	10	29
Durham	30	....	....	1	..	..	4	..	4	..	1	.....	40	93	3	43
Elgin	18	9	3	1	..	..	4	2	1	..	1	.....	39	78	11	50
Essex	17	14	1	4	..	..	12	..	1	..	....	.....	49	80	12	61
Frontenac	3	6	....	..	..	..	7	..	..	..	....	.....	16	46	19	35
Glengarry	17	6	....	..	..	..	4	..	3	..	....	.....	30	70	13	43
Grenville	2	2	1	..	..	..	6	..	1	..	....	.....	12	57	9	21
Grey	55	7	....	1	..	..	9	1	..	..	....	.....	73	84	14	87
Haldimand	13	7	1	..	..	..	3	..	1	..	....	.....	25	66	13	38
Halton	13	4	3	..	1	..	3	1	..	..	....	.....	25	83	5	30
Hastings	12	8	....	..	..	1	14	..	1	..	....	.....	36	61	23	59
Huron	57	8	4	..	..	..	18	1	..	..	....	.....	88	77	26	114
Kent	20	27	3	..	..	..	18	..	..	..	....	1	69	77	20	89
Lambton	48	6	5	..	..	..	12	..	1	..	....	.....	72	82	16	88
Lanark	20	5	1	1	..	..	5	..	5	..	....	.....	37	66	19	56
Leeds	5	3	1	..	1	..	3	..	..	..	....	.....	13	52	12	25
Lennox & Addington	6	6	....	..	..	..	2	..	1	..	....	.....	15	52	14	29
Lincoln	6	2	....	..	..	..	4	..	..	..	....	.....	12	75	4	16
Middlesex	50	10	....	..	1	..	26	3	2	..	2	.....	94	84	18	112
Norfolk	5	10	....	..	..	..	3	1	2	..	1	.....	22	56	17	39
Northumberland	19	6	....	..	..	..	4	2	..	..	....	.. ...	31	72	12	43
Ontario	64	5	1	..	..	..	9	..	4	..	....	.....	83	87	12	95
Oxford	24	8	1	..	..	..	7	..	2	..	....	.....	42	74	15	57
Peel	27	6	3	..	..	..	4	2	1	..	....	.....	43	91	4	47
Perth	41	4	....	..	..	..	9	2	1	..	....	.....	57	85	10	67
Peterboro	22	9	....	..	..	..	2	1	..	..	....	.....	34	68	16	50
Prescott	7	3	1	..	..	..	....	1	..	1	....	.....	13	48	14	27
Prince Edward	7	9	....	..	..	..	3	..	..	..	....	.....	19	68	9	28
Renfrew	11	8	....	1	..	..	7	..	7	..	....	.....	34	55	28	62
Russell	10	2	....	1	..	..	4	..	..	..	....	.....	17	50	17	34
Simcoe	50	12	....	1	..	..	10	..	3	1	....	.....	77	77	23	100
Stormont	5	2	....	..	..	..	....	..	..	..	....	.....	7	30	16	23
Victoria	44	2	1	..	..	1	3	..	1	..	1	.....	53	78	15	68
Waterloo	24	6	....	..	..	..	2	1	1	..	1	.....	35	78	10	45
Welland	1	5	3	2	..	..	4	..	1	..	....	.....	16	73	6	22
Wellington	52	8	....	..	..	..	4	..	2	..	....	.....	66	80	16	82
Wentworth	5	5	....	1	..	..	7	1	1	..	....	.....	20	67	10	30
York	57	17	4	..	..	..	14	9	3	1	....	.....	105	87	16	121
New Ontario	28	17	1	..	..	..	5	..	1	1	....	.....	53	48	57	110
Outside points	8	1	1	..	..	..	....	..	1	..	....	1	12	85	2	14
	1,038	299	42	19	4	3	280	31	60	6	7	4	1,793	74	640	2,433

ENROLMENT BY COUNTIES.

BREEDS: Clydesdale, Hackney, Suffolk, Morgan, Shire, Percheron, Thoroughbred, Belgian Draft, French Coach, French-Canadian, Standard Bred, German Coach
ABBREVIATIONS: Clyde. Hack. Suff. Morg. Per. Thor. Bel. Dr. Fr. Ch. Fr. Can St. Br. Ger. Ch.

BRANT COUNTY.

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Argumant (imp.)	4733	3957	Per.	4426	1902	W. H. Littlefield	Brantford	F. 1915	1
Daniel Roberts	....	3179	Grade	3473	1905	John W. Devereux	Brantford	S. 1917	3
Cholderton Prime Minister (imp)	76	2801	Suff.	3313	1911	W. J. Roddick	Brantford (R.R. 4)	F. 1916	1
Jauze (imp.)	3822	3841	Per.	4396	1909	N. Dyment	Brantford	F. 1916	1
Griffin	....	1383	Grade	2373	1907	F. R. Hanks	Brantford (R.R. 1)	S. 1915	3
Johnny Goldring	....	1863	Grade	2688	1907	Hiram S. Howey	Brantford	F. 1914	3
Peter Alexander	1620	3952	St. Br.	4514	1910	W. H. Littlefield	Brantford	S. 1917	1
Prince Arthur	....	240	Grade	441	1900	Thos. Robson	Brantford	S. 1914	3
Royal Ardlethen	6902	3429	Clyde	3883	1904	Millar & Millan	Brantford	S. 1915	1
Whitegate Royal George (imp.)	807	4314	Hack.	4906	1913	Millar & Millan	Brantford	S. 1916	1*
Norwell Chieftain (imp.)	828	383	Shire	798	1908	George Allen	Burford	F. 1916	1
Brilliant Boy	4549	872	Clyde	1644	1904	J. E. Brethour & Nephews	Burford	S. 1914	1
Teddy R.	....	4404	Grade	4907	1906	Leeman Pursley	Burford	S. 1916	3
Briton	5978	727	Clyd.	1110	1905	Orloff Hager	Caledonia	S. 1915	1
Longwynd Nobby (imp.)	23	4460	Wel. Pony.	4824	1913	Stephen Duckworth	Farringdon Hill	S. 1916	1*
Riband Junior	....	960	Grade	1781	1909	Peter Johnson	Hagersville	F. 1916	3
Harley Baron	14733	1806	Clyde	2183	1910	John Brown	Harley	S. 1917	1
Bonar Law	2192	4301	St. Br.	4738	1911	Carl Terryberry	Harley	S. 1916	1*
Joker	4539	4497	Per.	5011	1913	Daniel House	Middleport (R.R. 1)	S. 1916	1*
Prince Erskine of Woodroffe	5246	538	Clyde	1332	1904	Thos. Matthews	Middleport	S. 1914	1
Dr. John Jr.	....	964	Grade	1799	1905	A. L. McIntyre	Mohawk	F. 1914	3
Warwick	615	4432	Hack.	4803	1909	Morgan E. Harris	Mohawk	S. 1916	1
Daylight, 2nd	3	4942	Wel. Pony.	5235	1905	J. Lloyd Jones	Mount Vernon	F. 1916	2
Michael Todd	....	4931	Grade	5368	1914	David Burning	Ohsweken	S. 1917	3
King Edward	....	1373	Grade	1387	1904	Alfred Fraser	Ohsweken	S. 1913	3
Adbolton Premier	840	4717	Hack.	5145	1915	Wm Carnegie	Paris	F. 1916	1
Boulder Grange du Fosteau	886	4960	Bel. Dr.	5408	1915	C. W. Gurney	Paris	S. 1917	1
Enghien (imp.)	675	395	Per.	381	1904	C. W. Gurney	Paris	F. 1912	1
Boulder Grange Prince	4827	4368	Per.	4908	1914	C. W. Gurney & Sons	Paris	F. 1916	1
Eman de St. Amand (imp.)	526	1102	Bel. Dr.	1481	1909	C. W. Gurney	Paris	F. 1916	2
Arbuteskan II.	....	3944	Grade	4477	1905	G. Burkhold	Paris	S. 1915	3

Islam (imp.)	3031	1358	Per.	618	1908	Haas Brothers	Paris (R.R 1)	S. 1915	1
Junior (imp.)	3824	2847	Per.	3399	1909	Haas Brothers	Paris (R.R. 1)	S. 1916	1
Baron Carrick (imp.)	8106	344	Clyde.	283	1904	Geo. Rogerson	Paris (R.R. 1).	F. 1912	1
Belmount Conqueror (imp.)	12674	336	Clyde.	246	1908	Geo. Rogerson	Paris (R.R. 1)	S. 1917	1
Victorious	18112	4927	Clyde.	5446	1915	H. Sborvsky	Paris	S. 1917	2
Auld Lang Syne (imp.)	16066	3169	Clyde.	3693	1905	Geo. Stevenson	Paris Sta.	F. 1914	1
Baron's Charm (imp.)	9238	90	Clyde.	683	1903	J. J. Foran	St. George	F. 1912	1
Brant Charming	17662	4345	Clyde.	4767	1913	Rosebrugh & Osborne	St. George	S. 1916	1*
Duke of Wellington	3672	1529	Per.	268	1907	Rosebrugh & Osborne	St. George	F. 1914	2
High Private	747	2933	St. Br.	3453	1907	Clemons Bros.	St. George	F. 1914	1

BRUCE COUNTY.

Royal Purse (imp.)	11857	91	Clyde.	686	1908	Anthony Chebott	Allenford	F. 1916	1
Favori	....	2246	Grade.	1873	1901	Favori Syndicate Co.	Armow	F. 1914	3
Scotland's Blend (imp.)	7668	335	Clyde.	243	1905	Scotland Blend Syndicate	Armow	F. 1914	1
Jack Wilkes	....	1226	Grade.	1983	1892	William Stewart	Armow	F. 1914	3
Major Hal.	063	2257	St. Br.	2853	1907	Con. Baker	Belmore	F. 1914	1
De Galifet	....	297	Grade.	1385	1899	Archibald Shearer	Cape Chin	F. 1914	3
Cumberland's Glory	....	3614	Grade.	3970	1911	Jas. Campbell	Cargill	F. 1916	3
Ryecroft Model	12379	3376	Clyde.	3845	1910	Cargill, Limited	Cargill	F. 1916	1
Sylvi (imp.)	1350	319	Per.	128	1903	Geo. Bechburger	Chepstow	F. 1912	1
Kaplan	857	637	St. Br.	693	1897	Joseph Acton	Chesley	F. 1914	1
Brant Boy	....	2753	Grade.	2404	1903	John Sinclair	Chesley	S. 1913	3
Captain Hunter II.	....	175	Grade.	974	1904	John Miller	Clavering	F. 1914	3
Scottish Blend	15657	4076	Clyde.	4625	1913	Herbert Ash	Dobbington	F. 1916	1
Silver Cloud (imp.)	8797	138	Clyde.	718	1905	Thos. Ferris	Dobbington	F. 1914	1
Baronswood	....	1971	Grade.	2829	1904	Richard Boyle	Dyer's Bay	S. 1915	3
Eel W.	....	1538	Grade.	2198	1907	Ephriam Rody	Elmwood	F. 1914	3
Knottingly Baronet (imp.)	988	647	Shire.	687	1905	Manno Rody	Elmwood	F. 1914	1
Lord Lowther (imp.)	8895	3328	Clyde.	3800	1900	Dan McNicol	Elmwood	F. 1914	1
Winsome King	11478	3327	Clyde.	114	1910	Dan McNicol	Elmwood	F. 1916	1
Sir Brant	17253	4979	Clyde.	5420	1915	David Willoughby	Elmwood	S. 1917	1
Augustus	1095	4905	Bel. Dr.	5447	1914	Michael Graf	Formosa	S. 1917	1
Invergowrie (imp.)	11468	320	Clyde.	110	1907	Michael Graf	Formosa	F. 1914	1
Earl Bickett (imp.)	12493	1916	Clyde.	1931	1909	Neil McClure	Glamis	F. 1916	1
Prince of Kirkside (imp.)	5883	12	Clyde.	244	1899	Anthony Symon	Glamis	F. 1912	1
Captain McKinney	1403	3473	St. Br.	105	1895	Chas. Sewers	Greenock	F. 1912	1
Davie (imp.)	736	2827	Hack.	3151	1899	John Forsyth	Greenock	F. 1914	1

Horse requires inspection.

BRUCE COUNTY.—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Gartly Baron	14625	1319	Clyde	1879	1911	Andrew Good	Greenock	F. 1916	1
Baron Hood (imp.)	8489	45	Clyde	112	1900	Levi Good	Greenock	F. 1912	1
Chlordyne (imp.)	13547	353	Clyde	335	1906	Levi Good	Greenock	F. 1914	1
Ichnobate (imp.)	3858	2875	Per.	3387	1908	Levi Good	Greenock	S. 1916	1
Garnament (imp.)	22	82	Fr. Co.	472	1906	Levi Good	Greenock	F. 1914	1
Mac Airies (imp.)	8266	2640	Clyde	2120	1900	Levi Good	Greenock	F. 1914	1
King Brice	1683	3958	St. Br.	4163	1911	Chas. Sewers	Greenock	S. 1917	1
O. U. McKinney	1404	4542	St. Br.	4755	1913	Chas. Sewers	Greenock	S. 1916	1*
Billie W.	....	3227	Grade	3440	1909	Jas. Walker	Hepworth	F. 1916	3
Bonnie Laird	10474	2662	Clyde	167	1907	Primmer Bros.	Hepworth	F. 1914	1
King's Selection	17780	4841	Clyde	5399	1915	J. T. Carruthers	Holyrood	S. 1917	1
Buchlyvie Mhor (imp.)	11300	2253	Clyde	1710	1909	R. Robinson & Co.	Kincardine	F. 1916	1
Diplomatist (imp.)	15278	3192	Clyde	3632	1908	Chas. Creech	Kincardine	S. 1917	1
Don Roma	2393	4871	St. Br.	5395	1900	L. O. Charlesworth	Kincardine	S. 1917	1
K. McGregor	2294	4872	St. Br.	5401	1912	L. O. Charlesworth	Kincardine	S. 1917	1
Sable Simmons	....	4531	Grade	5002	1898	I. L. Fitzgerald	Kincardine	S. 1916	3
Favori 2nd	....	2569	Grade	314	1908	Thos. F. Lindsay	Kincardine	S. 1917	3
Panama (imp.)	1471	3188	Per.	205	1904	Joseph Hatt	Lion's Head	F. 1914	2
Annandale (imp.)	7150	1055	Clyde	860	1904	Albert Swanson	Lion's Head (R.R. 1)	F. 1912	1
Paddy S.	....	2298	Grade	2755	1905	Duncan McLean	Lorne	F. 1914	3
Slander Junior	....	1742	Grade	1808	1900	J. J. Stout	Lorne	F. 1914	3
Bay King Traveler	1351	3171	St. Br.	3700	1906	W. E. Henderson	Lucknow	F. 1914	1
Our Choice	14696	822	Clyde	1905	1910	Stuart E. Robertson	Lucknow, R.R. No. 3	F. 1916	1
Happy Jack	16508	4716	Clyde	5134	1914	George Swan	Lucknow	F. 1916	1
Promoter (imp.)	16335	3876	Clyde	4256	1909	Kenneth Farrish	Lucknow	S. 1917	1
Sir Walter's Best	4814	2368	Clyde	2947	1904	Wm. A. Taylor	Lucknow	F. 1914	1
Bruno Brino	....	2519	Grade	3219	1906	William Huck	Mildmay	S.1915	3
Dansire	1931	4383	St. Br.	4794	1913	Frank J. Steffler	Mildmay	S. 1916	1*
Max	909	4204	Bel. Dr.	4681	1913	W. H. Huck	Mildmay	F.1916	1
Fyvie Peer (imp.)	16338	3874	Clyde	4253	1912	W. S. Airth & Co.	North Bruce, R.R. No. 1	F. 1916	1
Kentucky Bill	....	990	Grade	1556	1910	J. H. Sieffert	North Bruce	S. 1917	3
Coronation	12339	2403	Clyde	3130	1910	Duncan Stewart	Paisley (R.R. 1)	S. 1917	1
Heather Jock	458	1912	Thor	2235	1901	William Rowand	Paisley	S. 1915	2
Military Crest	18126	4643	Clyde	5063	1913	Stephen Winch	Paisley	S. 1916	1
Fascinator (imp.)	13912	1147	Clyde	2087	1910	W. J. Wilson	Pinkerton	F. 1916	1
Baron Burgie	....	2130	Grade	2883	1911	Wm. J. Craig	Pt. Elgin, R.R. No. 1	F. 1916	3

Jake of Fairfield (imp.)	11757	573	Clyde	207	1909	David Jeffrey	Port Elgin	F. 1916	1
Gallant Carruchan (imp.)	8853	1535	Clyde	1216	1902	David Campbell	Ripley	F. 1912	1
Spruce Hill	14202	3854	Clyde	4446	1912	Jas. A. Harris	Ripley	F. 1916	1
Popinjay (imp.)	11984	575	Clyde	218	1909	McTavish & Wylie	Ripley	F. 1916	1
Slap Bang (imp.)	13935	351	Clyde	333	1910	Malcolm Matheson	Ripley	F. 1916	1
Drumburle Again	16395	4104	Clyde	4078	1913	Morgan & Cuthbertson	Ripley	F. 1916	1
Avondale	787	4944	Hack	5278	1914	S. W. Pollock	Ripley	S. 1917	1
Blythe Sturdy	18973	4750	Clyde	5171	1915	Neil C. Swinton	Southampton	F. 1916	1
Bruce Sturdy	18972	4751	Clyde	5172	1914	Neil C. Swinton	Southampton	F. 1916	1
Iron Mask	15444	3404	Clyde	3867	1912	Neil C. Swinton	Southampton	F. 1916	1
Maple Crest Mine	11524	9	Clyde	209	1910	Andrew Gammie	Tara	S. 1917	1
Marquis Mine	17811	4863	Clyde	5259	1914	Andrew Gammie	Tara	S. 1917	1
Pride of Arran	10212	11	Clyde	208	1909	Andrew Gammie	Tara	S. 1917	1
Royal Knight (imp.)	15294	3252	Clyde	3530	1910	Geo. Henderson	Tara	F. 1916	1
Jeffrey	....	1018	Grade	1470	1910	Robt. Kinmond	Tiverton (R.R. 3)	S. 1917	3
Baron Byron (imp.)	7744	677	Clyde	104	1903	Jas Moffat	Teeswater	F. 1912	1
Craigisla's Favourite	14286	4642	Clyde	5020	1912	Hugh Semple	Teeswater	S. 1916	1
Prince Mark (imp.)	13370	676	Clyde	103	1909	Jas. Moffat	Teeswater	F. 1916	1
Ernest Wilkes	....	2228	Grade	2906	1909	Jos. Kenney	Teeswater	S. 1917	3
Kap Belsire	....	4641	Grade	4859	1913	Thos. O'Malley	Teeswater	S. 1916	3*
King of Bruce	17186	4644	Clyde	5089	1913	John Keir	Teeswater	S. 1916	1*
King Darrel	12906	3797	Clyde	4311	1911	Hugh McDougall	Tiverton	F. 1916	1
Gladstone	5480	4757	Per.	5157	1914	Irwin Brothers	Walkerton	F. 1916	1
Gladsdone Jr.	3929	4312	Per.	4830	1913	Irwin Brothers	Walkerton	S. 1916	1*
Kossuth (imp.)	3003	1160	Per.	1630	1910	Irwin Brothers	Walkerton	F. 1916	1
Institut (imp.)	1336	688	Per.	115	1908	Jas. B. Cahoon	Walkerton, R.R. No. 4	F. 1916	1
Kentucky Star Wilkes	....	3331	Grade	3802	1897	Henry Ernst	Walkerton	S. 1915	3
Pacific Canadien	1474	4711	Fr. Can.	5244	1913	Henry Ernst	Walkerton	S. 1917	1
Lorraine (imp.)	4440	3702	Per.	4243	1911	A. G. Fortune	Walkerton	F. 1916	1
Pink	....	2227	Grade	2169	1907	Henry Ernst	Walkerton	S. 1915	3
Maple Grove Baron	17067	4908	Clyde	5346	1914	Abram Rowand	Walkerton	S. 1917	1
Orrie's Pride	15515	3928	Clyde	4486	1912	Hugh Crawford	Wiarton, R.R. No. 5	F. 1916	1
Gamy Stanton	....	3242	Grade	2422	1907	Jas. Gladstone	Wiarton	S. 1914	3

CARLETON COUNTY.

Memento Silver Rapids (imp.)	14927	3953	Clyde	4050	1912	James Burt	Bell's Corners	F. 1916	1
Zenobia	....	4940	Grade	5313	1905	M. Faulkner	Billings Bridge	S. 1917	3
Last Word	14290	3719	Clyde	4182	1912	Chas. Dunlop	Billings Bridge	F. 1916	1
Koquelin (imp.)	4460	3771	Per.	4083	1910	A. Armstrong	Carp	F. 1916	1

Horse requires inspection.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Solon (imp.)	15426	4537	Clyde	4984	1910	E. H. Graham & Son	Carp	S. 1916	1*
Verona Leader	866	1267	Shire	2032	1909	Geo. A. Hodgins	Carp	F. 1916	1
Royal Erskine (imp.)	13699	2848	Clyde	3391	1911	Howard K. Hodgins	Carp (R.R. 1)	F. 1916	1
Scottish Diadem	17145	4707	Clyde	5209	1914	J. J. G. Hodgins	Carp	F. 1916	1
Rosebank (imp.)	4100	1914	Clyde	2053	1900	Parker Kennedy	Carp (R.R. 3)	F. 1917	1
Royal Montrose	8517	1657	Clyde	2562	1905	W. J. Wilson	Carp	S. 1914	1
Lavis (imp.)	3897	2871	Per.	3298	1911	J. H. Skuce	Carsonby	S. 1916	1*
Craigie Revolt (imp.)	18044	4700	Clyde	5111	1914	Adam Scharfe	Cummings Bridge	F. 1916	1
Fyvie Junior	16256	3914	Clyde	4429	1913	Adam Scharfe	Cummings Bridge	F. 1916	2
Sir James MacMaster	17490	4812	Clyde	5325	1915	Horace C. Pinhey	Dunrobin (R.R. 1)	S. 1917	1
Sir William Torrance	15572	4138	Clyde	4610	1913	Horace C. Pinhey	Dunrobin (R.R. 1)	F 1916	1
Scottie	....	4681	Grade	5107	1912	W. J. Campbell	Fitzroy Harbour	S. 1916	3*
Baron Silloth (imp.)	6128	2272	Clyde	80	1903	A. Miller & Sons	Galetta	F. 1912	1
Castleford	2240	4896	St. Br.	5335	1915	Walter P. Hurdman	Hurdsman's Bridge	S. 1917	1
Sir Donald Elrig	14956	4255	Clyde	4721	1912	Ed. Whalen	Kars	F. 1916	1
Borden 2nd	13013	1879	Clyde	2705	1911	John Bidgood	Kinburn	F. 1916	2
Farmer	....	2341	Grade	3065	1910	Albert Hicks	Kinburn	F. 1916	3
Blondin De Rouveroy (imp.)	660	3221	Bel. Dr.	3615	1910	Thos. Costello	Manotick	F. 1916	1
Tifty's Pride (imp.)	13820	3322	Clyde	1159	1909	John Pyper	Manotick Station	S. 1917	1
Little Bobs	13368	2407	Clyde	3126	1910	Norman J. McCormick	Marvelville	S. 1917	1
Dandy	....	2531	Grade	3119	1903	Robert Bell	North Gower	S. 1914	3
Whitney	13012	4496	Clyde	4837	1911	Jas. Callander	North Gower	S. 1916	1*
Hapathique (imp.)	1518	686	Per.	869	1907	G. E. Lewis	North Gower	F. 1914	1
Baron Flashknot	15530	4146	Clyde	4186	1913	Jas. MacKey	North Gower	F. 1916	1
Keswick Jr.	....	4017	Grade	4194	1902	Antoine Leduc	Orleans	F. 1914	3
Benedictine (imp.)	14582	2858	Clyde	3390	1911	Michael O'Brien	Osgoode Station	S. 1917	1
Koyama	8029	732	Clyde	872	1906	Wm. Allen	Osgoode Station	F. 1914	1
King of Greely	....	3888	Grade	4474	1912	Wm. O'Brien	Osgoode Station	S. 1917	3
Frank	....	2782	Grade	3283	1911	Jas. O'Rourke	Osgoode Station	F. 1916	3
Pride of Dalmeny	1145	4737	St. Br.	5243	1910	W. J. Marshall	Osgoode Station	F. 1916	2
Silver Band	13423	3750	Clyde	4183	1911	Samuel Wyatt	Osgoode Station	F. 1916	1
The Gleaner	683	3806	St. Br.	4178	1908	Arthur Blackburn	Ottawa	F. 1916	1
Boni	1604	4937	St. Br.	5359	1909	R. R. Foster	Ottawa, 99 Irving Ave.	S. 1917	1
Guy Dennis	2396	4897	St. Br.	5336	1913	Wm. Cundell	Ottawa 9 Kearney St...	S. 1917	1
Paul	....	991	Grade	1565	1900	W. J. Loughren	Ottawa 547 Laurier W..	S. 1915	3
Wilkes Hal	....	3893	Grade	4313	1907	W. J. Loughren	Ottawa	S. 1915	3

Gay Larabie	969	1512	St. Br.	2314	1906	Edward O'Malley	Ottawa, 337 Queen St..	F. 1914	2
Dunnottar (imp.)	13906	2955	Clyde	3403	1911	B. Rothwell	Ottawa (R.R. 1)	F. 1916	1
Hillsdale Performer	838	4813	Hack.	5330	1915	B. Rothwell	Ottawa (R.R. 1)	S. 1917	1
Spier Olcott	....	4682	Grade	2416	1910	F. A. Tracey	Ottawa	F. 1916	3
Todd McGregor	....	4683	Grade	5106	1910	F. A. Tracey	Ottawa	F. 1916	3
Young Briton	....	1864	Grade	2691	1909	Frank Laporte	Piperville	F. 1916	3
Jolly Chimes	....	4297	Grade	4827	1913	John W. Buchanan	Richmond	S. 1916	3*
Harry	....	4713	Grade	5123	1913	Samuel Mann	Richmond	F. 1916	3
Lord Kintore (imp.)	8451	358	Clyde	374	1906	Thos. Burke	South March	S. 1915	1
Duke of Kenmore	9638	413	Clyde	672	1909	H. H. McCoy	Stanley's Corners	F. 1916	1
Baron Sterling 2nd	17084	4837	Clyde	5337	1914	T. A. Hand	Stittsville	S. 1917	1
Young Rosebank	....	2769	Grade	669	1906	Joseph Lewis	Stittsville	F. 1914	3
Craigie Swell (imp.)	15428	2928	Clyde	3406	1912	David Scharf	Stittsville	S. 1916	1*
Young Baron Elrig	....	4274	Grade	4724	1913	Harold Spearman (Estate)	Stittsville	F. 1916	3
Laurentian Boy	2409	4900	St. Br.	5349	1914	R. A. Watchorn	Stittsville	S. 1917	1
On Guard's Baron	16861	4424	Clyde	4834	1914	D. J. Kennedy	Vernon	S. 1916	1*
Duke of Forest View	9133	1353	Clyde	1416	1908	W. J. Major	Woodlawn	S. 1916	1
Prince of Huntley	7741	836	Clyde	1719	1907	S. T. Smith	Woodlawn (R.R. 1)	F. 1914	1
Lord Carrick	5563	586	Clyde	375	1905	T. E. Dolan	Woodlawn	S. 1915	3
Black Prince	....	3792	Grade	4180	1909	Jas. Waters	Woodlawn	F. 1916	3

DUFFERIN COUNTY.

Cower Chief (imp.)	13818	783	Clyde	1141	1909	Geo. E. Wilson	Belwood	F. 1916	2
Shrapnel	18967	4947	Clyde	5343	1914	Robt. B. Oldfield	Corbetton	S. 1917	1
Robert Joe	....	1502	Grade	1057	1898	A. & E. Colley	Corbetton	F. 1912	3
Prince Marmion	15073	4374	Clyde	4336	1911	Thos. McFadden	Glen Cross	S. 1916	1*
Loyal Hero (imp.)	9715	770	Clyde	1456	1907	Geo. Clayton & Son	Grand Valley	F. 1914	1
Marquis' Own	16389	4223	Clyde	4116	1913	Geo. Clayton	Grand Valley	F. 1916	1
Dalziel (imp.)	10626	3406	Clyde	2442	1903	Batters & Mournahan	Grand Valley	S. 1913	1
Tom McNab (imp.)	9800	1067	Clyde	442	1904	Wm. Clayton	Grand Valley	F. 1912	1
Gladstone Mack	5514	2181	Clyde	2861	1905	James Greenwood	Grand Valley	S. 1915	1
Lothian McKay	17763	4764	Clyde	5280	1914	Robt. Holborn	Grand Valley	S. 1917	1
Linton Again	18098	3260	Clyde	3747	1910	Wm. Martin	Grand Valley	F. 1916	1
King's Reward (imp.)	10453	1634	Clyde	878	1907	Joshua Montgomery	Grand Valley	F. 1914	1
Glendale Count (imp.)	15193	3124	Clyde	3666	1911	S. T. & J. H. Platt	Grand Valley	F. 1916	1
Scottish Moncreiffe	14169	4506	Clyde	4402	1912	M. C. Ward	Grand Valley	F. 1916	1
Sir Manuel (imp.)	13754	716	Clyde	1250	1908	John Lee & Wilson Irwin	Hockley	F. 1916	1
Jobard (imp.)	2208	1097	Per.	919	1909	Thos. W. Dunseath	Honeywood	F. 1916	1

* Horse requires inspection.

DUFFERIN COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Ganymede III.	....	1782	Grade	2359	1902	George Allan	Horning's Mills	F. 1914	3
Harfang (imp.)	3193	2065	Per.	2639	1907	James H. Bell	Laurel, R.R. No. 2	F. 1914	1
Lord Kinnoul (imp.)	10017	1616	Clyde	1388	1907	Robert Fife	Laurel	F. 1914	1
Albion (imp)	14453	1478	Clyde	2365	1910	Geo. Hepton	Laurel	F. 1916	1
Young Champion	....	124	Grade	544	1909	W. E. Smith	Laurel	S. 1917	3
Mario (imp.)	4282	3051	Clyde	2343	1901	J. E. Ferris	Mansfield	S. 1915	1
Prince of Cardow (imp.)	12030	379	Clyde	540	1909	R. J. Ormsby	Mansfield	F. 1916	1
Montrave Max	12804	1723	Clyde	2489	1910	John Donkin	Melancthon	S. 1917	1
Apologize	383	2323	Thor.	527	1906	Joseph Duke	Melancthon	F. 1914	1
Royal Tower (imp.)	14499	2902	Clyde	3454	1911	E. & N. Ferrier	Melancthon	F. 1916	1
Baron Dufferin	18416	4783	Clyde	5301	1914	J. B. Murdy	Melancthon	S. 1917	1
Beesboro' Freeman (imp.)	9931	446	Clyde	912	1907	R. Switzer & P. Contlen	Monticello	F. 1914	1
Flashwood Chief	18635	4758	Clyde	5170	1914	Alexander Ward	Monticello	F. 1916	1
Great Times	15407	4377	Clyde	4750	1913	Wm. J. Cullen	Orangeville	S. 1916	1*
Golden Ball (imp.)	13286	1113	Clyde	1211	1908	John S. Graham	Orangeville	F. 1916	1
Very Direct	....	3780	Grade	4393	1907	N. L. McQuarrie	Orangeville	S. 1915	3
King Alfred	10873	396	Clyde	1365	1910	Geo. I. Nodwell	Orangeville	F. 1916	1
Todd Bell	1695	4011	St. Br.	4376	1912	T. C. Peavoy	Orangeville	F. 1916	2
Spier Simmons	850	3578	St. Br.	3954	1910	W. H. Riddell	Orangeville	F. 1916	1
Prince of Maryfield (imp.)	6095	3554	Clyde	3889	1901	John Suggitt	Orangeville	F. 1914	1
Kirminock Mac (imp.)	12122	1933	Clyde	657	1908	Nathaniel Thompson	Orangeville	F. 1916	1
Montrave Viceroy	12805	1487	Clyde	533	1910	Jas. R. Gibson	Orton	F. 1916	1
Tom Miln	18774	4763	Clyde	5279	1914	John Greenaway	Orton R. R. No. 2	S. 1917	1
Jim Direct	1707	4148	St. Br.	4118	1912	G. Fletcher	Rosemont	F. 1916	1
Jeannin (imp.)	3074	3248	Per.	3741	1909	Wm. Thompson	Rosemont	F. 1916	1
Northern Light (imp.)	13909	803	Clyde	1825	1909	Wm. Thompson	Rosemont	F. 1916	1
Bonaday	....	4766	Grade	5329	1907	F. J. Hassard	Saskatoon	S. 1917	3
Antillo Jr.	....	288	Grade	1350	1907	R. H. Galbraith	Shelburne, R. R. No. 2	S. 1915	3
Baron Columbus (imp.)	6106	749	Clyde	530	1905	John Mowat	Shelburne	F. 1914	1
Mograzia	155	2689	St. Br.	518	1903	John Mowat	Shelburne	F. 1914	1
King Gartly	19184	4911	Clyde	5448	1913	Wm. Rowan	Shelburne	S. 1917	1
Pride of Amaranth	14791	1170	Clyde	916	1910	Nelson Teeter	Waldemar	F. 1916	1

DUNDAS COUNTY.

Black Charley	....	1554	Grade	2297	1907	Patrick Mullen	Brinston	S. 1916	3
Royal of St. Lawrence	12300	871	Clyde	1643	1909	Aden R. Thompson	Brinston	S. 1916	1
Larry Larabie	....	3122	Grade	3611	1911	Simeon Bogart	Chesterville	F. 1916	3
Harry	....	4887	Grade	5435	1910	W. A. Durant	Chesterville	S. 1917	3
A Night Rider	1346	3788	St. Br.	4319	1907	T. J. Ellis	Chesterville	S. 1915	1
Prince Guard	....	4977	Grade	5281	1914	Chas. Graham	Chesterville	S. 1917	3
Billy Birk	....	4876	Grade	5067	1911	Wm. B. Hamilton	Chesterville	S. 1917	3
Black Guard	16931	4902	Clyde	5360	1914	Alex. B. McConnell	Chesterville	S. 1917	1
Scottish Ring (imp.)	13852	4625	Clyde	5068	1910	Calvin M. Munro	Chesterville (R.R. 2)	S. 1916	1*
Prince Russell	17208	4695	Clyde	5230	1914	Chas. Hanson	Dixon's Corners	F. 1916	1
Sir James P. Whitney	19173	4874	Clyde	4209	1913	Ira Ennis	Inkerman	S. 1917	1
Prince Logan	7180	2167	Clyde	2924	1905	D. C. Mulloy	Inkerman	S. 1915	1
Cecil R.	....	3838	Grade	4143	1912	Ancil Ault	Iroquois	F. 1916	3
Black Prince	....	959	Grade	1780	1910	Benjamin Henry	Iroquois	F. 1916	3
Admiral Jellicoe	873	4433	Thor.	4809	1913	Geo. C. McKenzie	Morrisburg	S. 1916	1*
Sir John of St. Lawrence	13051	4202	Clyde	3126	1911	Alex. Thom	Morrisburg	F. 1916	1
Everard Hy. (imp.)	13522	1320	Clyde	1868	1904	W. H. Latourell	Mountain	F. 1914	1
Ormond Hero	13092	3743	Clyde	4206	1911	A. E. McLean	Ormond	F. 1916	1
Duke of Ormond	10575	2155	Clyde	2877	1909	Thos. D. McLean	Ormond	F. 1916	1
Young General	....	962	Grade	1783	1903	David Hess	South Mountain (R.R.1)	F. 1914	3
Outlaw (imp.)	602	386	Hack.	794	1909	Elgin Montgomery	South Mountain	F. 1916	1
Mountain Prince	13468	3998	Clyde	3258	1910	J. E. Montgomery	South Mountain	F. 1916	1
Silver Boy	....	128	Grade	932	1904	I. J. Pitts	Williamsburg	F. 1912	3
Farmer Boy	....	622	Grade	836	1904	Geo. S. Prunner	Williamsburg	F. 1912	3
Hantan (imp.)	1521	429	Per.	796	1907	Williamsburg Percheron Horse Assn., Williamsburg		F. 1914	1
Scotch Hero	17125	4360	Clyde	4848	1913	Milton Coons	Winchester	S. 1916	1*
Grenadier	3997	4922	Per.	5268	1913	Kenneth E. Hutt	Winchester	S. 1917	1
Crystal Worthy	58	1521	St. Br.	2140	1908	Thos. Irving	Winchester	F. 1916	1
Coveney Marmion (imp.)	329	430	Hack.	799	1903	Thos. Irving	Winchester	F. 1912	1

DURHAM COUNTY.

Prince of Carpathia	15001	4031	Clyde	4592	1912	Wm. McGill & Son	Bethany (R.R. 1)	F. 1916	1
Dolphington (imp.)	9762	2059	Clyde	2473	1907	Jas. H. McKinnon	Bethany	F. 1914	1
Derwent Pride	15957	4457	Clyde	4867	1913	F. H. Ward	Bethany	S. 1916	1*
Royal Derwent	18677	4784	Clyde	5303	1914	F. H. Ward	Bethany	S. 1917	2
Antevolo Rysdyk	51	1525	St. Br.	2103	1910	S. A. Devitt	Blackstock	F. 1916	1
Royal Montrave	18638	4856	Clyde	5311	1914	W. C. Ashton	Bowmanville (R.R. 4)	S. 1917	1

* Horse requires inspection.

DURHAM COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Baron's Best (imp.)	13930	603	Clyde	439	1901	Robert Beith	Bowmanville	F. 1912	1
Mainspring	721	2821	Hack.	3352	1911	Robert Beith	Bowmanville	F. 1916	2
Terrington Cetewayo (imp.)	401	601	Hack.	437	1905	Robert Beith	Bowmanville	F. 1914	1
Tipperary	826	4828	Hack.	5240	1914	Robert Beith	Bowmanville	F. 1916	1
Waverley Baron	18013	4822	Clyde	5083	1914	Robert Beith	Bowmanville	F. 1916	1
Montrave Imperialist (imp.)	12646	649	Clyde	720	1908	R. M. Cale	Bowmanville	F. 1916	2
Alcyonium Boy Jr.	....	2601	Grade	3255	1908	W. W. Down	Bowmanville	S. 1915	3
King's Lynn (imp.)	10743	2280	Clyde	2220	1904	Chester Power	Bowmanville	F. 1914	1
Lancier De Petit (imp.)	61	1641	Bel. Dr.	965	1905	G. W. Soper	Bowmanville	F. 1914	1
Lewie MacInnes	4447	1959	Clyde	2107	1903	Thos. Hyland	Burketon	S. 1913	1
Thoor Patch	640	3940	St. Br.	4328	1911	S. J. McMillan	Campbellcroft	S. 1917	1
Black Model	16880	4811	Clyde.	5315	1914	J. W. Lowes	Cavan (R.R. 1)	S. 1917	1
Dunure Beaulieu (imp.)	12681	845	Clyde.	1741	1910	J. W. Lowes	Cavan (R.R. 1)	S. 1917	1
Pride of Balmyre (imp.)	9753	2484	Clyde.	3177	1906	Rupert Winslow	Cavan	S. 1915	1
Joe Gleam	16716	3729	Clyde.	4261	1912	A. W. Wilson	Franklin (R.R. 1)	F. 1916	1
Terrington Denmark	774	3959	Hack.	4489	1912	A. W. Wilson	Franklin (R.R. 1)	S. 1917	1
Mahratta (imp.)	13374	1450	Clyde.	2218	1907	Richard Wilson	Franklin	F. 1914	1
Lewie Gordon	....	171	Grade	977	1897	P. Francis	Fraserville	F. 1914	3
Royal Ribbon (imp.)	13932	602	Clyde.	438	1910	Clydesdale Horse Breeders' Assn., Hampton (R.R. 1)		F. 1916	2
Prince Palatine (imp.)	15907	3432	Clyde.	3887	1910	Grandy Brothers	Ida (R.R. 1)	F. 1916	1
Golden Dawn	15704	4445	Clyde.	4964	1913	J. F. Staples	Ida	S. 1916	1*
Marquis Freeland	16402	4726	Clyde.	4240	1912	Hugh McGill	Janetville (R.R. 2)	F. 1916	2
Anagram (imp.)	13823	2279	Clyde.	1143	1911	McIntyre Thornton	Janetville Sta.	F. 1916	1
Sir Pride	16441	3982	Clyde	4314	1912	H. L. Carson	Millbrook	S. 1917	1
Alois	5277	1996	Ger. Co.	2707	1907	J. D. Deyell & H. Nattress	Millbrook	F. 1914	1
Sir David Junior	14458	483	Clyde.	760	1909	John Hutchinson	Millbrook	F. 1916	2
Dunure Baron (imp.)	6150	1262	Clyde.	2055	1903	Patterson Brothers	Millbrook	F. 1914	1
Lord Derwent (imp.)	9336	1263	Clyde.	2054	1904	Patterson Brothers	Millbrook	F. 1914	1
Hubert Waxford	....	2727	Grade	1389	1899	J. J. Powell	Millbrook	F. 1914	3
Golden Taylor	18590	4793	Clyde.	5326	1915	Geo. H. Hooton	Mt. Pleasant	S. 1917	1
Lord Spencer (imp.)	13287	926	Clyde.	261	1908	Jamieson & Dwyer	Newcastle	F. 1916	2
Baron Polwarth (imp.)	11298	365	Clyde.	435	1908	Jas. A. Rowan	Nestleton Sta. (R.R. 1)	F. 1916	2
Proud Gambler	1715	3471	St. Br.	3888	1901	M. F. Chalk	Port Hope	F. 1914	1
Baron Kipling (imp.)	17285	4875	Clyde.	4965	1913	Wm. Linguard	Port Hope	S. 1916	1*
Glenavon	11467	3166	Clyde.	3427	1907	Wm. Linguard	Port Hope	S. 1916	1
Barron (imp.)	3212	3584	Clyde.	1360	1897	Geo. Smith	Starkville	F. 1914	1
King Sable	961	1939	St. Br.	433	1902	Hugh McGill	Yelverton	F. 1912	1

Steel Arch Jr.	....	1741	Grade	1802	1906	Chas. J. Collinson	Aylmer West	F. 1914	3
Hofwart	2078	862	Ger. Co.	473	1907	East Elgin Coach Horse Association,	Aylmer	F. 1914	1
Nasbaden	83	1955	Thor.	477	1907	East Elgin Thoroughbred Horse Association,	Aylmer	F. 1914	1
Lord Stock	....	2930	Grade	478	1903	C. P. May	Aylmer	F. 1914	3
Radium (imp.)	13314	534	Clyde	951	1905	David Robins	Aylmer West	F. 1914	1
Naval Hero	18085	4830	Clyde	5260	1914	F. E. Sansburn	Aylmer (R.R. 4)	S. 1917	1
Sidmont Sprague	1178	3579	St. Br.	476	1901	C. J. Weisbrod & Co.	Aylmer	F. 1912	1
Mouchoir (imp.)	4725	3913	Per	4342	1912	John Buchanan	Campbellton	F. 1916	1
Arlon (imp.)	62	1915	Bel. Dr.	2026	1907	Ira Hayward	Corinth	F. 1914	1
Blacon's Favorite	14652	4376	Clyde	4734	1912	A. D. Black	Dutton	S. 1916	1*
Hal C.	....	4608	Grade	4494	1903	R. E. Coates	Dutton	S. 1915	3
Dalrioch Prince (imp.)	12543	370	Clyde	485	1910	Alex. G. Duncanson	Dutton	F. 1916	1
Handsome Chief (imp.)	8750	1400	Clyde	480	1904	A. & D. McGeachy and J. D. Black	Dutton	F. 1912	1
Submarine Prince	19271	4891	Clyde	5150	1915	Alex. G. Duncanson	Dutton	F. 1916	1
Tupelo 2nd	....	2162	Grade	2904	1910	A. D. McKellar	Dutton	F. 1916	3
Kuroki 2nd (imp.)	626	3640	Shire	3247	1902	John McVannel	Dutton	F. 1914	1
Incognito (imp.)	2368	2767	Per.	998	1908	W. A. Sloan	Fingal	S. 1916	1
Mimulus (imp.)	10681	1279	Clyde	2167	1907	W. A. Sloan	Fingal	F. 1914	1
Battle	1826	4885	St. Br.	5431	1908	Miss K. L. Wilkes	Galt	S. 1917	1
						Mgr. Geo. S. McCall	St. Thomas		
Pride of Huron	12124	2960	Clyde	3134	1909	J. C. Burke	Lawrence Station	F. 1916	1
Jasper of Walnut Grove (imp.)	573	95	Shire	698	1908	Andrew A. Miller	Middlemarch	F. 1916	1
Klaustral (imp.)	4469	3989	Per.	4080	1910	F. Dunsford	New Sarum	F. 1916	1
Snowflake	....	201	Grade	474	1907	Verlin Tisdale	Orwell	F. 1914	3
La Harpe (imp.)	4459	3892	Per.	4059	1911	James Brackenbury	Pt. Burwell	F. 1916	1
Kozan (imp.)	3855	2870	Per.	3385	1910	C. E. Glasgow	Pt. Stanley	S. 1916	1*
Glenlea Pride	17844	4447	Clyde	4983	1913	John McLean & Son	Rodney	S. 1916	1*
Waldorf Favorite	16693	4346	Clyde	4784	1913	G. P. Schleihauf	Rodney (R.R. 2)	S. 1916	1
Ben Carrick	710	3441	Thor.	2649	1899	Conrad Schweitzer	Rodney	S. 1914	1
Revelanta Stamp (imp.)	11584	648	Clyde	702	1908	J. P. & R. J. Spence	Rodney	F. 1916	1
T. J. Lewis	294	1720	St. Br.	2505	1905	John Barnes	St. Thomas	F. 1914	1
Idlewild	....	2173	Grade	2836	1906	Geo. A. Lawton	St. Thomas (R.R. 6)	F. 1914	3
Tinto	4534	4808	Per.	5251	1914	James Parish	St. Thomas	S. 1917	1
Brown Todd	....	3472	Grade	3346	1909	Grant Colley	Shedden	F. 1916	3
Tyrolien (imp.)	3615	2066	Per.	2641	1900	Hallum Keiller	Shedden	F. 1914	2
Gardyke Prince (imp.)	522	2738	Shire	3011	1903	W. C. Montgomery	Shedden	F. 1914	1
Old Darnley	10317	844	Clyde	1738	1909	E. A. Stafford	Shedden	F. 1916	1
Kinglymoore	1686	2319	St. Br.	2902	1899	Frank Comfort	Shedden	F. 1914	1

* Horse requires inspection.

ELGIN COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Mark Hanna	....	2611	Grade	2292	1901	Mills & Butterwick	Sparta	F. 1914	3
Norfolk Performer	131	1573	Hack.	89	1901	Bert Cady	Springfield	F. 1912	1
Up-To-Date Knight	14282	3934	Clyde	4388	1912	John Williamson	Springfield	S. 1917	1
Young Wild Sam	....	188	Grade	337	1905	James Howe, Jr.	Staffordville, R.R. 1	F. 1914	3
Young Dexter	....	592	Grade	424	1902	Wm. H. Nickerson	Vienna	F. 1912	3
Prince William	8295	109	Clyde	787	1906	Geo. W. Teall	Vienna	S. 1914	1
Chester Charming	13367	2443	Clyde	2690	1906	Jas. McMullen	Wallacetown (R.R. 1)	F. 1914	1
Gericault	3513	3187	Per.	3370	1912	Geo. B. O'Malley	Wallacetown	S. 1916	1*
Irish Jack	773	2436	Per.	36	1908	Geo. B. O'Malley	Wallacetown	S. 1915	1
Highland Laddie	8367	79	Clyde	387	1908	John A. Lamont	Wardsville	F. 1916	1
Black Duke	11736	143	Clyde	748	1907	Robert Liddle	Wardsville	S. 1915	1
Baron Blend	11276	1596	Clyde	1764	1909	John Frank	West Lorne	S. 1917	1
Cope	....	949	Grade	1069	1903	Babcock & Langs	Yarmouth Centre	F. 1914	3

ESSEX COUNTY.

Rustywood	....	3709	Grade	4026	1897	Theo. Langlois	Amherstburg	F. 1914	3
Arner's Coquette	....	1746	Grade	2608	1908	John Arner	Arner	S. 1917	3
Robbie Burns	10108	1880	Clyde	2702	1909	Chas. Corbett	Belle River	S. 1917	1
Frank	....	1749	Grade	2599	1911	Remi Dauphinias	Belle River	F. 1916	3
Keir Jimmie	12968	3086	Clyde	3617	1911	David Coulter	Blytheswood	F. 1916	1
Isaac P.	1943	349	Per.	304	1909	W. J. Fox	Blytheswood	F. 1916	1
Doctor Highwood	1150	3948	St. Br.	4491	1907	R. Meston	Blytheswood (R.R. 1)	S. 1915	1
Sir Wilfred	9113	3309	Clyde	3789	1906	Chris. Stevenson	Blytheswood	F. 1914	1
Wilbur (imp.)	420	2417	Bel. Dr.	1756	1908	Canard River Horse Breeders' Assn.,	Canard River	S. 1915	1
Sky Bryson	2010	4461	St. Br.	4033	1909	D. B. Entricken	Comber	F. 1916	1
Bonnie Lad	14432	4096	Clyde	4032	1912	Robert Knister	Comber	F. 1916	1
King Canuck	1262	4702	St. Br.	5147	1911	Robert Knister	Comber	F. 1916	1
Bob Bennett	3094	3698	Per.	4000	1912	R. J. Goslin & Sons	Cottam (R.R. 1)	F. 1916	2
Black Ore	1000	1726	St. Br.	2471	1905	R. J. Goslin & Sons	Cottam (R.R. 1)	F. 1914	2
Doctor Highwood	1150	3948	St. Br.	4491	1907	R. J. Goslin & Sons	Cottam (R.R. 1)	S. 1915	1
Frederic	525	815	Per.	1880	1906	R. J. Goslin & Sons	Cottam (R.R. 1)	S. 1914	1
Royal Richardson	8513	43	Clyde	59	1907	Roy Alexander	Essex	F. 1914	1
Royal Arch	11673	3039	Clyde	3586	1910	J. A. Coulter Estate	Essex	F. 1916	1
Brown Pepper	059	3037	St. Br.	1754	1903	A. C. Doan	Essex	F. 1914	1

Jerry	....	305	Grade	1466	1908	Wm. J. Lapain	Essex (R.R. 2)	F. 1916	3
Keir Democrat (imp.)	7018	62	Clyde	1090	1901	R. B. Pinkerton	Essex	F. 1912	1
Periscope	4930	4790	Per.	5319	1913	W. A. St. Louis	Ford	S. 1917	1
I. X. L.	....	3293	Grade	3353	1903	Alfred Trudell	Ford City	F. 1914	3
Mayor	4239	3625	Per.	3532	1910	C. E. Forman	Harrow	F. 1916	1
Rodrique Jr.	4237	3624	Per.	3518	1908	C. Forman	Harrow	F. 1916	1
McGregor	....	4337	Grade	4741	1907	R. A. McLean	Harrow	S. 1916	3
Fendlair (imp.)	745	3397	Per.	3156	1904	Thomas Clark	Kingsville	F. 1914	1
Toney Boy	2250	1266	Per.	2035	1910	Edward Hickmott	Kingsville (R.R. 2)	F. 1916	1
Brilliant Lad	4225	3274	Per.	3761	1910	Christian Johnson	Kingsville	F. 1916	1
Prince Albert	4226	3275	Per.	3750	1910	Christian Johnson	Kingsville	F. 1916	1
Bay Jocko	1373	2037	St. Br.	2803	1907	John Lampman	Kingsville	S. 1915	1
Korail (imp.)	4105	2996	Per.	3528	1910	Lambert P. Wigle	Kingsville	F. 1916	2
Cheerful Pat 2nd	1165	4862	Shire	5155	1913	G. A. Brown	Leamington	F. 1916	1
Dashing King (imp.)	6099	1464	Clyde	2139	1904	G. A. Brown	Leamington	F. 1914	1
Patch Minor	087	4378	St. Br.	4770	1911	E. Mather	Leamington	S. 1916	1*
Star Pointer Jr.	....	1032	Grade	305	1905	Lewis Wigle	Leamington	F. 1914	3
Witcham Adonis (imp.)	715	3199	Hack.	302	1903	Lewis Wigle	Leamington	F. 1914	1
Celtic Park	15131	3663	Clyde	4110	1912	Thos. Barnes & Son	Maidstone (R.R. 2)	F. 1916	1
Pleasant Park Jim	13644	3106	Clyde	3568	1911	Thos. Barnes & Son	Maidstone (R.R. 2)	F. 1916	1
Tony B.	....	4762	Grade	5265	1914	Samuel G. Brundage	Maidstone	S. 1917	3
Celtic Prince (imp.)	5323	729	Clyde	1670	1904	Joseph Phillips	Maidstone	F. 1914	1
King Robert	12033	1386	Clyde	1669	1909	Joseph Phillips	Maidstone	S. 1917	1
Gallant Clyde	14771	3721	Clyde	4109	1912	Thos. Phillips	Maidstone	F. 1916	1
Keir Democrat 2nd	14751	4523	Clyde	4148	1912	Jas. Charette	McGregor	F. 1916	1
Fred Steele	1427	3253	St. Br.	3644	1910	W. W. Hill	Ruscomb	F. 1916	1
Tullock Again	14284	4667	Clyde	5094	1912	Adam Knister	Ruscomb	S. 1916	1*
Jusant (imp.)	2140	517	Per.	564	1909	J. D. Malott	Ruthven	F. 1916	1
Panhart	2398	4826	St. Br.	5115	1913	Jas. S. Scott	Sandwich	S. 1917	1
Maple Grove Fred	....	4966	Grade	5457	1914	John Anderson	Staples	S. 1917	3
Van Birr	11664	1683	Clyde	2243	1910	Gordon Cowan	Staples	F. 1916	1
Gazouilleur (imp.)	1048	4263	Per.	4332	1906	Frank Demers	Stoney Point	S. 1915	1
Carnot De Gemel (imp.)	164	909	Bel. Dr.	1290	1905	J. B. Lalonde	Stoney Point	F. 1914	1
Carnot De Gemel Jr.	968	4665	Bel. Dr.	5093	1913	J. B. Lalonde	Stoney Point	S. 1916	1*
Ganzenplukker (imp.)	452	492	Bel. Dr.	1319	1908	Geo. Cecile	Tecumseh	S. 1917	1
Maplehurst Forest King	...	4446	Grade	4934	1909	Armand Palmer	Tilbury	S. 1916	3
Dolphie Brino	2292	4703	St. Br.	5158	1913	Alex. Trudell	Tilbury	F. 1916	1
Dan Sphinx	1689	3215	St. Br.	359	1902	W. H. Bond	Walkerville	F. 1914	1
Theodore	4267	2115	Per.	1829	1908	Daniel Rogers	Wheatley	S. 1916	1
Royal Lanty	8391	4213	Clyde	2162	1907	Chas. Bauer	Woodslee	F. 1914	2
Alpha	....	1860	Grade	2684	1899	Geo. Christie	Woodslee	F. 1914	3
Dominion Boy	....	3637	Grade	1557	1902	Chas. Manchester	Woodslee	S. 1915	3

* Horse requires inspection.

FRONTENAC COUNTY.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Wildwing	760	1084	St. Br.	1506	1911	John Williams	Battersea	F. 1916	1
Prince Charlie	10475	394	Clyde	584	1908	Samuel Shanks	Cananto	F. 1916	1
Young Foxhunter	....	2859	Grade	3336	1901	Isaac Bushell	Cataraqui	S. 1914	3
Sidney Pointer, Jr.	....	189	Grade	317	1905	Andrew Howie	Cataraqui	S. 1915	3
Norman Royal, Jr.	....	1025	Grade	1505	1905	John Trudell	Collin's Bay	F. 1914	3
Allen Direct	....	4547	Grade	370	1906	W. J. Lyons	Harrowsmith	S. 1916	3
Benton Wilkes	....	1580	Grade	1422	1906	Edward Whitty	Harrowsmith	F. 1914	3
Fred Patch	....	4720	Grade	5220	....	Edward Whitty	Harrowsmith	F. 1916	3
Aberlady 2nd	11291	50	Clyde	235	1910	Jas. Greenlee	Joyceville	F. 1916	1
Farmer's Pride	3392	2777	Per.	3102	1906	John Alarie	Kingston, 27 Brock St.	S. 1914	1
Joe H. Patchen	....	2849	Grade	3410	1909	John Bannister	Kingtson	F. 1916	3
Weston Gentry	0127	4744	St. Br.	5227	1912	Geo. Darragh	Kingston	F. 1916	1
Bernard McKinney	1971	4492	St. Br.	4893	1913	Wm. H. Eves	Kingston	S. 1916	1*
Fitz-James	....	940	Grade	1667	1908	Fred. Gerdis	Kingston (R.R. 1)	S. 1915	3
Colonel	3476	2763	Per.	2099	1907	Lewis Martin	Kingston	S. 1915	2
Lord Direct	....	1034	Grade	307	1906	Thos. K. Nicholson	Kingston, 75 Main St.	F. 1914	3
Penalty	1970	4299	St. Br.	4890	1911	W. C. Randall	Kingston, 73 John St.	S. 1916	1*
Exaltim	758	3300	St. Br.	3787	1910	E. S. Steen	Kingston, 292 Johnston	F. 1916	1
Judge Murphy	1029	2267	St. Br.	315	1908	Fred. Whitney	Kingston, 29 Brock St.	F. 1916	1
Julian	....	4159	Grade	3388	1909	L. Martin	Kingston	F. 1916	3
Justin (imp.)	3057	1085	Per.	1568	1909	W. W. Asseltine & Co.	Moscow	F. 1916	1
Dock Direct	....	4549	Grade	4941	1913	Walter Hegadorn	Odessa (R.R. 3)	S. 1916	3*
Young Wattie	....	505	Grade	1165	1907	Oliver R. Clow	Parham	F. 1914	3
Kabotin	5521	4734	Per.	5226	1914	C. W. Langwith	Sunbury	F. 1916	1
Kabot (imp.)	3001	521	Per.	557	1910	The Storrington Stock Co.	Sunbury	F. 1916	1
Model Farmer	....	1033	Grade	306	1908	E. Mapstone	Sydenham	S. 1915	3
Capton Porther	....	253	Grade	664	1906	D. S. Hannah	Tichborne	F. 1914	3
Royal Major	....	184	Grade	383	1908	T. L. Reynolds	Verona	F. 1916	3
Larry	.....	4986	Grade	5462	1913	Wm. J. Thompson	Wilson	S. 1917	3
Tip	....	4157	Grade	4652	1913	J. G. Greenwood	Wolfe Island	S. 1917	3
Amardale	1858	4569	St. Br.	5044	1913	Oliver Hawkins	Wolfe Island	S. 1916	1*
Sandy McPherson	....	3759	Grade	4029	1911	E. J. Horne	Wolfe Island	F. 1916	3
Victor William (imp.)	16377	3894	Clyde	4462	1912	Ed. Horne	Wolfe Island	F. 1916	1
Brino Dillion	....	4163	Grade	2133	1913	Clarence Kenny	Wolfe Island	F. 1916	3
Beauchemier	3844	4544	Per.	4943	1913	Geo. E. Keys	Wolf Island, Box 47	S. 1916	1*

Del Monte Bond	736	1672	St. Br.	2479	1906	N. M. Bellamy	Alexandria	F. 1914	1
MacLeod	7213	3243	Clyde	3516	1905	Emmanuel Brunet	Alexandria	F. 1914	1
Joigny (imp.)	2820	1619	Per.	1676	1909	M. Fitzgerald & J. Kerr	Alexandria	F. 1916	1
Silver Joe	....	1716	Grade	2519	1905	I. B. Sauve	Alexandria	F. 1914	3
Lord Howick (imp.)	9692	1303	Clyde	1949	1907	John D. Fraser	Athol	F. 1914	1
Glassford Laird (imp.)	11875	767	Clyde	1449	1907	J. H. McVicar	Bainsville	F. 1914	1
Honest Tom	....	4273	Grade	4697	1908	F. W. Loney	Cornwall	F. 1915	3
Nigger	....	2853	Grade	3445	1910	Moses Beauchamp	Dalhousie Mills	F. 1916	3
Landerneau (imp.)	3979	3095	Per.	3650	1911	Alex. McKay	Dalhousie Station	F. 1916	1
Captain Flush	17102	4403	Clyde	4881	1913	D. A. McLeod	Dalhousie Station	S. 1916	1*
Peter Chicken	2275	4879	St. Br.	5296	1911	Ranger Brothers	Dalhousie Station	S. 1917	1
Doune Chief (imp.)	6297	2146	Clyde	2793	1903	Duncan J. Clark	Dalkeith	F. 1914	1
Jack	....	2126	Grade	2867	1908	W. J. Denovan	Dalkeith	F. 1916	3
Major Flush	12350	835	Clyde	1716	1910	Neil McLeod	Dalkeith	F. 1916	1
Aberdeen's Pride	13503	3005	Clyde	3553	1911	Geo. N. Vogan	Dalkeith	F. 1916	1
Invader	....	2209	Grade	2934	1902	Geo. N. Vogan	Dalkeith	S. 1915	3
Castle Baron (imp.)	6127	1315	Clyde	1911	1904	William MacLeod	Dunvegan	F. 1914	1
Fyvie Prince (imp.)	6126	826	Clyde	1910	1904	Wm D. MacLeod	Dunvegan	F. 1914	1
Baby Cloud	....	4976	Grade	5468	1913	Amedie Decoste, Jr.	Glen Robertson	S. 1917	3
Bruce	8948	1076	Clyde	323	1908	Jos. St. Onge	Glen Robertson	S. 1915	1
Impeccable	2245	3950	Per.	1558	1908	W. S. Jamieson & D. McMillan	Glen Sandfield	S. 1917	1
Red Spark	....	4910	Grade	5437	1914	Stewart MacRae	Glen Sandfield	S. 1917	3
Percheron (imp.)	258	879	Per.	1675	1902	W. R. Montgomery	Gravel Hill	F. 1914	1
Young Top Gallant, Jr.	....	129	Grade	1094	1902	J. R. Kippen	Greenfield	F. 1912	3
Joffre of Maxwelton	5522	4932	Per.	5292	1915	J. A. MacLachlan	Green Valley	S. 1917	1
Craigie Ian (imp.)	15247	3323	Clyde	3745	1911	D. A. McGillivray	Kirkhill	F. 1916	1
King Royal	292	2220	St. Br.	2932	1911	C. W. Creswell	Martintown	F. 1916	1
Duke of Connaught	782	4427	Hack	4797	1912	D. C. McArthur	Martintown	S. 1916	2*
Pap Larabie	1052	2418	St. Br.	1077	1900	J. E. McIntosh	Martintown	F. 1914	1
Cock of the North	16592	4339	Clyde	4745	1914	Hugh A. Robertson	Martintown	S. 1916	1*
Vivacity 2nd	13015	436	Clyde	839	1911	Hugh A. Robertson	Martintown	F. 1916	1
Hortensis, Jr.	....	3786	Grade	4398	1911	John Russel	Martintown	F. 1916	3
Smylett Performer (imp.)	164	145	Hack	708	1900	J. J. Anderson & Jas. Stuart	Maxville	F. 1914	1
Prince	....	2574	Grade	3187	1909	A. N. Campbell	Maxville (R.R. 1)	S. 1917	3
Vivacity (imp.)	4444	685	Clyde	1083	1902	Duncan McNaughton	Maxville	F. 1912	1
Sir Thomas	....	3160	Grade	3672	1907	Theodule Gauthier	St. Raphael West	S. 1915	3
Prince Ambrose	....	2313	Grade	1317	1902	D. R. McDonald	St. Raphael West	F. 1914	3
Rigolo (imp.)	3586	1625	Per.	1461	1902	McRae, MacDonald & O'Day	St. Raphael West	S. 1914	1

* Horse requires inspection.

GLENGARRY COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Victor of St. Lawrence	12721	440	Clyde	855	1909	Donald Hope	Summerstown	F. 1916	1
Baron	....	1779	Grade	2419	1910	Kenneth McCaskill	Vankleek Hill	F. 1916	3
Watlington Squire (imp.)	686	1940	Hack	608	1904	A. D. Loynachan	Williamstown	F. 1912	1
Bold Archer	5477	1135	Clyde	1004	1903	P. & D. McCrimmon	Williamstown	F. 1912	1
Great Eastern (imp.)	15162	3766	Clyde	3425	1907	P. & D. McCrimmon	Williamstown	F. 1914	1

GRENVILLE COUNTY.

Jay Bird 2nd	1672	3996	St. Br.	4202	1911	Wm. Johnson	Bishop's Mills	F. 1916	1
Bellboleer	401	1701	St. Br.	2539	1909	Rufus McCoy	Bishop's Mills	F. 1916	1
Gitchie Manato	920	2970	St. Br.	3404	1899	Geo. E. Lane	Cardinal	S. 1914	1
Grand March	....	3425	Grade	3878	1912	W. J. Stethem	Cardinal (R.R. 2)	F. 1916	3
Patchen Hal	039	739	St. Br.	1180	1909	Bowman Wright	Domville	F. 1916	1
Dick Baker	....	1871	Grade	1999	1909	C. J. Wright	Jasper	S. 1917	3
Lombric (imp.)	4148	2931	Per.	3332	1911	W. J. Adams	Kemptville	F. 1916	1
Sir Walter	....	2372	Grade	3090	1910	Robt. Brown	Kemptville	S. 1917	3
Hal Clause	017	545	St. Br.	655	1909	T. M. Griffin	Kemptville	F. 1916	1
Hillhurst Fashion	493	4776	Hack	5098	1903	Ben. Henry	Kemptville	F. 1916	1
Honest Charlie	....	3278	Grade	3773	1907	Ben. Henry	Kemptville	F. 1914	3
Wilkes B., Jr.	....	3674	Grade	4296	1909	Raymond Brothers	Kemptville	F. 1916	3
Young Holeux 2nd	....	4817	Grade	5377	1913	Wesley Montgomery	Merrickville	S. 1917	3
Baron of Perth	15815	3832	Clyde	4117	1913	Thos. Johnston	North Augusta	F. 1916	2
Gartly Baron	10423	2717	Clyde	650	1909	Leonard T. Sunderland	North Augusta	F. 1916	2
Sundown	575	1415	Shire	2310	1908	Jos. Fletcher	Oxford Mills	S. 1917	1
Young Colonel Chief	....	4860	Grade	5423	1914	Thos. Hanlan	Oxford Mills	S. 1917	3
Pone	....	2539	Grade	1792	1908	Louis Typhair	Oxford Sta. (R.R. 2)	F. 1916	3
Young Curzon	....	507	Grade	1183	1908	Samuel Simons	Prescott	F. 1916	3
Cecil R.	874	740	St. Br.	1184	1899	J. A. Hyndman	Spencerville, R.R. No. 3	F. 1912	1
Gaulois (imp.)	1523	315	Per.	73	1906	R. W. Kingston	Spencerville	S. 1914	2

GREY COUNTY.

Mardi (imp.)	4441	3712	Per.	4245	1912	W. M. Atchison	Bognor	F. 1916	1
Pride of Fashion (imp.)	16194	3504	Clyde.	3060	1904	Gilbert Morrison	Bognor (R.R. 1)	F. 1914	1
Lockwood Chief	14437	3660	Clyde.	4049	1912	P. J. Ryan	Cedarville	F. 1916	1

King of Kelton	11764	2722	Clyde.	3106	1909	Wm. J. Campbell	Chatsworth	F. 1916	1
Sensation	3359	418	Per.	723	1899	Walter Agnew	Chesley	F. 1914	1
Mistletoe Mac	14501	3886	Clyde.	4158	1912	Jas. Vancise	Chesley	F. 1916	1
Avocation	4796	4687	Per.	5116	1911	Brown Brothers	Clarksburg	F. 1916	1
Dictator	3773	3812	Per.	4334	1903	John H. Brown	Clarksburg	S. 1915	1
Longburgh Squire	9335	2412	Clyde.	3080	1908	W. G. Gott	Dundalk	F. 1916	2
Surmise	157	1108	Thor.	2083	1898	R. R. Kinnell & W. T. Neithercut, Dundalk		F. 1914	1
Hyacinthus (imp.)	11251	2076	Clyde.	2750	1904	S. W. & J. M. Mills	Dundalk	S. 1914	1
Muskogee Baron	1759	4536	St. Br.	4811	1908	Chas. Palmer	Dundalk	F. 1916	1
The Peer (imp.)	13845	1123	Clyde.	1243	1910	I. E. Haug	Durham	F. 1916	1
Seneca (imp.)	13915	1477	Clyde.	2362	1910	J. J. Jandt	Elmwood (R.R. 4)	F. 1916	1
King of the Clydesdales	14030	4451	Clyde.	153	1909	J. A. Myles	Fairmount	S. 1916	1
Sir Alexander	6781	801	Clyde.	1819	1904	Wm. Fulford	Fairmount	S. 1915	1
King Chattan (imp.)	8815	487	Clyde.	1162	1903	Jas. Arnott	Feversham	F. 1912	1
Celtic Everard	19033	4819	Clyde.	5390	1914	Wm. Davidson	Feversham	S. 1917	1
George Rooker	....	3365	Grade	3829	1910	W. J. Little	Feversham	S. 1917	3
Kentucky Sam	856	736	St. Br.	1163	1905	Geo. H. Whiteoak	Feversham	F. 1914	1
Ronald of Tangy (imp.)	12238	2758	Clyde.	689	1907	Isaac Eby	Hanover	F. 1914	1
Oro Sphinx	....	4064	Grade	271	1909	Walter S. Lines	Hanover	S. 1917	3
Lord Kelly	13238	499	Clyde.	1411	1910	Almer Campbell	Heathcote	S. 1917	1
Lansdowne (imp.)	8450	580	Clyde.	247	1906	John W. Julian	Heathcote	F. 1914	2
High Lord (imp.)	11485	2196	Clyde.	2186	1908	Jas. A. Myles & Co.	Heathcote	F. 1916	1
Prince of Canada	13532	2194	Clyde.	2187	1910	Jas. A. Myles & Co.	Heathcote	F. 1916	1
Stalwart (imp.)	7813	384	Clyde.	901	1902	W. M. Groat	Holstein	F. 1912	1
Marnix (imp.)	607	1519	Bel. Dr.	1059	1902	Edward Hoy	Holstein	F. 1912	1
Royal Tie (imp.)	11890	26	Clyde.	1312	1908	Edward Hoy	Holstein	S. 1916	1
St. Ivel (imp.)	15227	3077	Clyde.	3616	1911	Alex. McDonald	Holstein	F. 1916	1
Young Ildebert	4480	4888	Per.	5439	1914	Samuel Robb	Holstein	S. 1917	1
Lord Roberts	....	4121	Grade	4504	1911	W. B. Smith	Holstein (R.R. 1)	F. 1916	3
Copernicus	14054	3837	Clyde.	4277	1912	Wm. Dingwall	Hopeville	F. 1916	1
Fortune Teller (imp.)	8739	1662	Clyde.	2528	1899	R. R. Kinnell	Hopeville	F. 1914	1
Predominant (imp.)	12490	1663	Clyde.	2527	1909	R. R. Kinnell	Hopeville	F. 1916	1
Gipsy Jake	....	4907	Grade	5174	1914	Jacob Hunt	Kilsyth	F. 1916	3
Barney Doyle	16809	4746	Clyde.	5175	1914	W. R. Burnett	Markdale	F. 1916	1
Cupbearer	444	793	St. Br.	1777	1906	Jas. A. Crowston	Markdale	F. 1914	1
Dominion Prince	17707	4495	Clyde.	4851	1913	Jas. A. Crowston	Markdale	S. 1916	1*
Gallant Baron (imp.)	8003	1304	Clyde.	1948	1906	Jas. A. Crowston	Markdale	F. 1914	1
Joe McGregor	1438	4190	St. Br.	4415	1901	Jas. A. Crowston	Markdale	S. 1915	1
Lainshaw Castle (imp.)	13807	1083	Clyde.	1778	1909	Jas. A. Crowston	Markdale	F. 1916	1
Horizon (imp.)	16341	3751	Clyde.	4279	1911	Wm. Foster	Markdale	F. 1916	1

*Horse requires inspection.

GREY COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyie No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Cairnbrogie Stamp	2527	1425	Clyde.	1797	1898	Jas. H. Lever	Markdale	F. 1914	1
Bailie Boy (imp.)	13766	612	Clyde.	633	1910	Angus McInnis	Markdale	F. 1916	1
Grattanice	1802	4610	St. Br.	4910	1909	J. E. Marsh	Markdale	S. 1916	1
Peter Burtwood	1737	4010	St. Br.	4157	1909	J. E. Marsh	Markdale	F. 1916	1
Baron Challoch (imp.)	5761	2355	Clyde.	2440	1904	Thos. Mercer	Markdale	F. 1914	1
Goliath	6456	2965	Clyde.	3005	1906	Albert Stafford	Markdale	F. 1914	1
Pride of All	6455	914	Clyde.	1577	1905	R. D. & V. G. Bowes	Meaford	F. 1914	1
Imperial Blend (imp.)	....	119	Grade	778	1904	J. C. Pilgrim	Meaford	F. 1914	3
Tony Dare	....	2299	Grade	2895	1906	E. O. Cooper	Meaford	S. 1915	3
Black Boy (imp.)	11780	1578	Clyde.	1657	1908	Geo. Drewery	Mt. Forest	S. 1917	1
Blyth Prince (imp.)	13758	691	Clyde.	1465	1910	Wm. Aldcorn	Mt. Forest	F. 1916	1
Sir Harold (imp.)	11880	415	Clyde.	678	1907	Walter A. Reeves	Mt. Forest	F. 1914	1
Prince	....	3580	Grade	3957	1910	Balzer Knapp	Neustadt	F. 1916	3
Tomeden (imp.)	13731	3629	Clyde.	1249	1909	Geo. Graham	North Keppel	F. 1916	1
Heron (imp.)	1594	417	Per.	688	1907	Mrs. Marion Ward	North Keppel	F. 1914	1
President Roosevelt (imp.)	7759	2716	Clyde.	82	1902	Milton E. Bebee	Owen Sound	F. 1912	1
Lord Helsington (imp.)	9802	928	Clyde.	1190	1905	Chris. Brock	Owen Sound	F. 1914	1
Clifton Swell (imp.)	13285	1125	Clyde.	1246	1909	Jos. Croome	Owen Sound	F. 1916	1
Walter Wilkes	....	1962	Grade	2666	1905	Stephen Leach	Owen Sound	F. 1914	3
Manor Prince	15805	2846	Clyde.	3351	1910	John & M. A. McIntyre	Owen Sound	S. 1916	1*
Maidenhall (imp.)	8459	63	Clyde.	1089	1906	R. J. Norton	Owen Sound	F. 1914	1
Sir Crossley (imp.)	11785	816	Clyde.	1884	1907	R. J. Norton	Owen Sound	F. 1914	1
Prince Gamblt	....	3547	Grade	3946	1909	John T. Reeve	Oxenden	F. 1916	3
Crown Parole	1831	4322	St. Br.	4729	1904	W. J. Patterson	Owen Sound	S. 1916	1
Royal Luck (imp.)	15281	2929	Clyde.	3407	1911	Grey Clydesdale Assn.	Presqu' Isle	S. 1916	1*
Weldonian McKinney	114	441	St. Br.	857	1910	J. A. McKenzie	Presqu' Isle	F. 1916	1
Queen's Regent (imp.)	12683	2326	Clyde.	2983	1909	Louis Frook	Priceville	S. 1916	1
Silver Strand (imp.)	9643	515	Clyde.	1307	1904	Louis Frook	Priceville	F. 1914	1
King's Abbot (imp.)	9807	1995	Clyde.	1058	1907	Daniel McLeod	Priceville	S. 1916	1
Bonnie Charlie	10142	53	Clyde.	1056	1909	Robt. G. Acheson	Proton	S. 1917	2
Rayo	19136	4685	Clyde.	5109	1914	Herbert J. Corbett	Proton Station	F. 1916	1
Fortune Prince	14201	457	Clyde.	1138	1910	Robt. Grummett	Proton	F. 1916	1
Argus	....	106	Grade	1348	1905	W. J. Love	Proton Station	F. 1914	3
Barrie Boy	950	4045	St. Br.	197	1909	J. L. McDonald	Proton	S. 1917	1
Newton Don 2nd	....	3783	Grade	4344	1912	Chas. McCutcheon	Proton Station (R.R.2)	F. 1916	3
Lord Kelvin	5736	3731	Clyde.	1713	1905	Isaac Brown	Rocklyn (R.R. 2)	F. 1914	1

MacNeilage Jr.	....	2025	Grade	2749	1900	Everett Martin	Rocklyn	F. 1914	3
Royal Mason	6526	2100	Clyde.	2773	1905	Thos. Betts	Rock Mills	S. 1915	1
Nicobar	2099	1350	Per.	1541	1905	Jas. Scott	Rocklyn	S. 1915	2
Marathon (imp.)	12610	2131	Clyde.	 450	1907	Jas. H. Lemon	Silcote	F. 1914	1
Moncreiffe Buchlyvie	16648	4655	Clyde.	5037	1913	Jas. H. Lemon	Silcote	S. 1916	1*
Kincairney (imp.)	9286	703	Clyde.	1055	1904	Chas. R. Reid & Wm. S. Atcheson	Varney	F. 1912	1
Buffalo Bill 2nd	....	997	Grade	1591	1905	John Scott	Varney	F. 1914	3
Bath Junior	....	104	Grade	 980	1908	J. H. Baker	Woodford (R.R. 4)	F. 1916	3

HALDIMAND COUNTY.

Kinpurnie (imp.)	7817	495	Clyde.	1171	1905	Fred Moore	Caledonia	F. 1914	1
All Gold	3479	488	Clyde.	1169	1901	Tanner Brothers	Caledonia	F. 1912	1
The Squire (imp.)	8751	462	Clyde.	 967	1902	John Downey	Canboro	F. 1912	1
Monksman Junior	....	123	Grade	1175	1903	H. K. Garner	Canfield	F. 1912	3
Premier Asquith	4961	4464	Per.	4882	1913	Peter Armstrong	Cayuga (R.R. 4)	S. 1916	2*
Sailor	....	107	Grade	1293	1892	Jas. A. Crumb	Dunnville (R.R. 6)	F. 1912	3
Jabloir	4019	3678	Per.	3989	1909	Dunnville Percheron Horse Assn.	Dunnville	F. 1916	1
Gay Prince	725	3467	Shire	3911	1911	Martin Michener	Dunnville (R.R. 2)	F. 1916	1
Halaska (imp.)	1598	398	Per.	1373	1907	David Patton	Dunnville	S. 1916	2
Kentucky Owyho	818	4078	St. Br.	... 576	1907	G. F. Windecker	Dunnville, Box 104	S. 1915	*1
Jarnac (imp.)	3053	3511	Per.	2971	1909	Nicholas Bacher	Fisherville	S. 1916	1
Leland Sensation	....	152	Grade	 684	1905	Jas. Zimmerman	Fisherville	F. 1914	3
Dr. John	780	646	St. Br.	 681	1896	Wm. Alward	Hagersville	F. 1912	1
Montaigu (imp.)	424	1183	Per.	1969	1905	Wm. & Thos. Beswetherick	Hagersville	S. 1913	1
Everest Again (imp.)	9170	1173	Clyde.	 508	1906	Isabella Gilbertson	Hagersville	F. 1914	1
Gay Spark (imp.)	6989	645	Clyde.	 680	1901	Geo. Gilbertson	Hagersville	F. 1912	1
Opulence (imp.)	8641	644	Clyde.	 677	1902	Geo. Gilbertson	Hagersville	F. 1912	1
Argyle Duke	13620	277	Clyde.	 979	1911	Henry Hammond	Hagersville	S. 1917	1
Wilfred King	....	4598	Clyde.	4905	1913	Anthony Harris	Hagersville	S. 1916	1*
Coronation	....	2589	Grade	 969	1903	Alex. Hunter	Hagersville	S. 1915	3
Elsing Lambert Shales	708	4073	Hack.	4586	1912	Geo. L. Hutchinson	Hagersville	S. 1917	1
Red Elk	....	3297	Grade	3779	1892	Wesley McDougall	Hagersville	S. 1915	3
Lord Commodore	15475	4321	Clyde.	4764	1913	Murray Martin	Hagersville	S. 1916	1*
Prince Aberdeen	....	4105	Grade	3200	1904	Jas. Swing	Hagersville	S. 1915	3
Young Coronation	....	4284	Grade	4705	1911	Samuel Jacques	Jarvis (R.R. 1)	S. 1917	3
King of Gretna (imp.)	12666	710	Clyde.	1223	1909	Montague, Nichol & Martin	Jarvis (R.R. 1)	F. 1916	1
Johnnie Mac	6761	1950	Clyde.	1384	1906	Arthur Porter	Jarvis	F. 1914	1

* Horse requires inspection.

HALDIMAND COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Janassa (imp.)	3034	2771	Per.	617	1909	Ira Minor	Low Banks	F. 1916	2
Orsano (imp.)	3425	737	Per.	1167	1902	Geo. Rinker	Low Banks (R.R. 1)	F. 1912	1
Princely Harold	13884	3705	Clyde.	3982	1912	Alex. Bartlett	Nanticoke	S. 1917	1
Black Astor	....	3608	Grade	1631	1899	Jos. Wiederick	Nanticoke	S. 1915	3
Baron Leven (imp.)	6108	416	Clyde.	679	1902	Milo A. Wood	Nanticoke	F. 1912	1
K. L. Todd	1134	3570	St. Br.	3908	1909	H. A. Lamb	Selkirk	F. 1916	1
Star Bingen	....	4326	Grade	4076	1910	H. A. Lamb	Selkirk	F. 1916	3
Haimon Jr.	....	2899	Grade	3431	1911	G. H. Yocom	Selkirk	F. 1916	3
Young Garneyland Castle	....	2471	Grade	2703	1907	Wm. B. Hamilton	York (R.R. 1)	F. 1914	3
Bold Boy Junior	....	1541	Grade	2224	1911	Harvey J. Hanna	York (R.R. 1)	F. 1916	3
Briton Jr.	....	283	Grade	1294	1909	Jas. Spittal	York	F. 1916	3

HALTON COUNTY.

Prince Poteath	....	2850	Grade	3319	1907	Thos. Storey	Acton West	F. 1914	3
Quebec Boy	745	611	Fr. Can.	412	1903	W. W. Boyd	Burlington	F. 1912	1
Baron Fickle	15453	4357	Clyde.	4832	1913	H. M. Robinson	Erindale	S. 1916	1*
The Tester (imp.)	12127	2134	Clyde.	1102	1907	H. M. Robinson	Erindale	F. 1914	1
Ace of Diamonds	....	1836	Grade	2648	1898	T. M. Alton	Freeman	F. 1914	3
Halton's Hero	8389	369	Clyde.	462	1907	Geo. A. Bell & Son	Freeman	F. 1914	1
Challoch Baron	13513	4265	Clyde.	4320	1009	F. A. Heslop	Freeman	F. 1916	2
Haxshire ex Illumination	2028	4662	St. Br.	5092	1905	F. A. Heslop	Freeman	S. 1916	1
Royal Torrance (imp.)	6621	1382	Clyde.	2206	1905	Watson Brothers	Freeman (R.R. 1)	F. 1914	1
Rock Mario	18040	4606	Clyde.	4455	1913	Ellery Brownridge	Georgetown (R.R. 2)	S. 1916	1*
Baron Audubon	757	659	St. Br.	1371	1905	Albert Sachs	Georgetown	F. 1914	1
Silver Treasure	15555	3823	Clyde.	4428	1913	Gordon Brecken	Merton	F. 1916	1
Sporty Boy	....	304	Grade	1431	1911	William Gunby	Millgrove	S. 1916	3*
King Brunstane	11818	1301	Clyde.	1953	1910	Neil Gillies	Milton (R.R. 5)	S. 1917	1
Hydrogene (imp.)	1050	1941	Per.	626	1907	W. E. McCready	Milton West	F. 1914	1
Lampiste (imp.)	3291	397	Per.	1366	1903	W. E. McCready	Milton West	F. 1914	1
Luth (imp.)	4470	3991	Per.	4086	1911	W. E. McCready	Milton West	F. 1916	1
Star Wilkes	....	2212	Grade	994	1899	Archie McDougall	Milton	F. 1914	3
Jaures (imp.)	3072	1473	Per.	2356	1909	Jas. McKenzie	Milton	S. 1917	2
Sir Milton	14273	3502	Clyde.	3919	1910	Jas. McKenzie	Milton	S. 1917	1

Proportion (imp.)	582	360	Shire	404	1907	Wm. J. Robertson	Milton West (R.R. 2).	F. 1914	1
Knight of Barglass (imp.)	....	75	Grade	972	1908	Jos. Telfer	Milton West	F. 1916	3
Bonnie Russell	18161	4739	Clyde.	5206	1913	Chas. W. Donoven	Moffatt (R.R. 1)	F. 1916	1
Oradell	1521	3497	St. Br.	3282	1902	Albert Foster	Norval	F. 1914	1
Baron Montrave (imp.)	16896	4043	Clyde.	1414	1904	A. G. Farrow	Oakville	F. 1914	1
Baron Kitchener	356	3147	Shire	3628	1900	G. E. Morden & Son	Oakville	S. 1915	1
Tuttle Brook Ringmaster	1103	4760	Shire	5261	1913	G. E. Morden	Oakville	S. 1917	1
Everest Yet	15804	4741	Clyde.	5266	1913	W. H. Morden	Oakville	S. 1917	2
Scotland Yet 2nd	16659	4742	Clyde.	5267	1914	W. H. Morden	Oakville	S. 1917	1
Main Chance	524	361	Thor.	406	1904	Jacob E. Lucas	Palermo	F. 1912	1

HASTINGS COUNTY.

Riverside Coin	5746	731	Clyde.	870	1907	Eldon Roy	Actinolite	S. 1915	1
Royal Bruce	....	4415	Grade	4048	1912	Harvey M. Bierwirth	Bancroft	S. 1916	3*
Bourbon Brook	1665	2609	St. Br.	177	1899	M. L. Sine	Bancroft	F. 1912	1
Angus Bingen	274	898	St. Br.	1533	1908	Wm. Carnew	Belleville	S. 1915	1
Sheriff Todd	253	4267	St. Br.	2421	1909	H. E. Fairfield	Belleville	F. 1916	1
Yorick (imp.)	14089	4601	Clyde.	1189	1910	John J. Fitzgerald	Belleville (R.R. 6)	S. 1916	1*
Matthew Hume	....	3481	Grade	3504	1902	John Orr	Belleville	S. 1915	3
Peter Range	2226	4735	St. Br.	5294	1913	C. F. Robinson	Belleville	S. 1917	1
Dauntless B.	4538	3761	Per.	4223	1912	N. Vermilyea & Sons	Belleville	F. 1916	1
Klinis (imp.)	4049	2948	Per.	3494	1910	N. Vermilyea & Sons	Belleville	F. 1916	1
Konsell (imp.)	4050	2949	Per.	3495	1910	N. Vermilyea & Sons	Belleville	F. 1916	1
Dexter Tariff	....	4410	Grade	4725	1912	Eleazer Williams	Belleville	S. 1917	3
Bartlett	251	3954	St. Br.	4326	1911	Jas. Redcliffe	Bellview	F. 1916	1
Rustic	....	1989	Grade	2734	1908	Peter Pello	Bird's Creek	S. 1915	3
Rouget Jr.	....	1218	Grade	2033	1908	Frank Plue	Bogart	S. 1917	3
Black Knight	5490	931	Clyde.	1379	1903	E. J. McConnell	Bronson	S. 1916	1
Lord Dundonald	1655	3907	Per.	4463	1910	Robert Dunning	Cannifton	F. 1916	1
Royal Ross 2nd	....	2358	Grade	3079	1905	Jas. Quinnlan	Cooper	F. 1914	3
Golden Rayner	090	4722	St. Br.	5255	1915	D. W. Hubbs	Corbyville	S. 1917	1
Duke of Fame	....	3556	Grade	3368	1904	Patrick Cassidy	Deseronto	S. 1914	3
Belle Boy 2nd	14623	1381	Clyde.	1561	1910	F. A. Comerford	Eldorado	F. 1916	1
Alick	645	4323	St. Br.	4215	1912	Ashley Stock Farm	Foxboro	F. 1916	1
George Rayner	026	3551	St. Br.	3835	1912	Ashley Stock Farm	Foxboro	F. 1916	1
Jack Rayner	086	4723	St. Br.	5258	1915	Ashley Stock Farm	Foxboro	S. 1917	1
Judge Carman	1073	4197	St. Br.	4691	1913	Ashley Stock Farm	Foxboro	S. 1917	1

* Horse requires inspection.

HASTINGS COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
McMartin	46	392	St. Br.	572	1909	Ashley Stock Farm	Foxboro	F. 1916	1
Ridlon	782	524	St. Br.	51	1902	Cyrus Garrison	Frankford	F. 1912	1
Tobe	....	2192	Grade	2941	1910	J. E. Wellman	Gunter	F. 1916	3
Baron Curzon (imp.)	7762	1078	Clyde.	170	1905	Robt. C. Wright	Holloway	F. 1914	1
Pioneer Prince	8608	1605	Clyde.	169	1908	Samuel Ray	Ivanhoe	F. 1916	1
Kambodje (imp.)	3756	2979	Per.	3525	1910	Frank McAvoy	Ivanhoe	F. 1916	1
Barney	....	1644	Grade	2400	1910	Wm. A. Miller	Madoc (R.R. 1)	F. 1916	3
Black Charley	....	639	Grade	455	1901	Wm. J. Burley	Marlbank	F. 1914	3
Winchester (imp.)	282	2607	Hack.	49	1901	Flynn & McCullough	Marmora	F. 1912	2
Acme's Echo	11623	2430	Clyde.	3135	1910	Patrick Maloney	Marmora (R.R. 1)	F. 1916	1
Ancona Louis	5095	2469	Per.	50	1901	Geo. Wellman	Marmora	F. 1912	1
Silloth Again	12147	1991	Clyde.	79	1910	Wm. J. Douglas	Maynooth	F. 1916	1
Prince George	....	1031	Grade	202	1905	John E. Green	Maynooth	S. 1915	3
Young Rustique	....	2317	Grade	3055	1909	John Hinze	Maynooth Station	F. 1916	3
Fred Wilkes	....	2013	Grade	2047	1910	R. A. McCulloch & M. Miller	Maynooth Station	F. 1916	3
Young Goldstone	....	3372	Grade	3369	1911	Walter Rouse	Maynooth	S. 1916	3*
Osgood's Beauty	970	1633	St. Br.	824	1905	Wm. H. Tice	Maynooth	F. 1914	1
City Patch	....	4359	Grade	4835	1914	Blake Collins	Plainfield	S. 1916	3*
Young Duke of Fame	....	4242	Grade	4713	1912	W. S. Dies	Shannonville	S. 1917	3
Tom Tariff	....	1245	Grade	1691	1905	Eliazer Williams	Shannonville	S. 1914	3
Young Pioneer	....	3760	Grade	4226	1912	Ernest Fitzgibbon	Steenburg	F. 1916	3
Harford Ashley	083	4853	St. Br.	1595	1913	Jas. J. Fitzpatrick	Stirling	F. 1916	1
Starlight Dan	....	3479	Grade	3485	1911	John C. Haggerty	Stirling	S. 1917	3
Sir Wilfred Jr.	....	223	Grade	55	1908	Wm. F. Hanna	Stirling	S. 1917	3
Julien (imp.)	4465	4170	Per.	4663	1909	W. Kingston, J. Belshaw, & A. Tweedie, Stirling		F. 1916	1
Houlton Pride	144	3757	Suff.	4213	1913	James McGowan	Stirling	F. 1916	1
Black Prince	....	1548	Grade	2248	1905	Dennis Fleming	Stoco	F. 1914	3
Mac Laddie	10432	427	Clyde.	773	1907	Thos. Leveck	Stoco	F. 1914	1
Jackson	4121	3268	Per.	3758	1909	Daniel Whalen	Stoco	S. 1917	1
Gold Dust	10609	3094	Clyde.	3646	1910	E. & D. Moore	The Ridge	S. 1917	2
R. L. Baron	....	4558	Grade	4953	1912	Daniel Henderson	The Ridge	S. 1916	3*
Tim Alert	....	1985	Grade	2417	1903	David Moore	The Ridge	S. 1913	3
Prince of Kinellar 2nd	3236	120	Clyde.	777	1900	Sim McRae	Tweed	F. 1912	1
Senator	3125	2333	Clyde.	1394	1900	Jas. & Geo. Kelly	Wood	F. 1914	2

Colston Leader (imp.)	5188	1637	Clyde	403	1900	Raymond McConnell	Auburn (R.R. 1)	F. 1912	1
Maitland Boy	12338	2625	Clyde	2609	1907	Henry Wagner	Auburn	F. 1914	2
Tetinus (imp.)	2266	588	Per.	396	1908	Robert Penhale	Bayfield	F. 1916	2
Allerby	1110	4993	St. Br.	5124	1907	Robert Penhale	Bayfield	F. 1916	1
Lord Mansfield	....	1734	Grade	2385	1904	Jas. Evans	Beechwood	S. 1914	3
King Gartsherrie	10219	1680	Clyde	2311	1909	H. F. Kirby	Belgrave	F. 1916	1
Jazeneuil (imp)	2909	2107	Per.	1471	1909	Scott Brothers	Belgrave	F. 1916	1
Dunure Gold Link (imp.)	9600	1330	Clyde	1848	1907	J. W. King	Bluevale	S. 1915	1
Mascot (imp.)	4598	1328	Clyde	1850	1902	J. W. King	Bluevale	F. 1914	1
Huron's Hiawatha	12947	4022	Clyde	4322	1911	L. O. Charlesworth	Blyth	F. 1916	2
Elmer Dickson	....	4881	Grade	5396	1909	Thos. J. Coulter	Blyth	S. 1917	3
Ike Medium	1070	2936	St. Br.	3474	1909	Thos. J. Coulter	Blyth	S. 1917	1
Honest John	12083	2	Clyde	397	1910	Jos. & Wm. Gray	Blyth (R.R. 1)	F. 1916	1
Blacon Cross (imp.)	9559	876	Clyde	1655	1907	Wm. Johnson	Blyth	F. 1914	1
East Huron Prince	17982	4129	Clyde	3966	1909	John Wells	Blyth	F. 1916	1
Pride of Glencairn (imp.)	10377	2652	Clyde	820	1908	J. E. Ellis	Blyth	F. 1916	1
Index (imp.)	3140	363	Per.	421	1908	Wm. Berry	Brucefield	F. 1916	1
Earl O'Clay (imp.)	12035	699	Clyde	953	1905	Robt. Murdoch	Brucefield	S. 1915	1
Blaisdon Colin (imp.)	307	2766	Shire	116	1898	Henry Bone	Brussels	S. 1915	1
Meaburn 2nd	17069	4704	Clyde	5168	1914	Henry Bone	Brussels	F. 1916	1
Shethin Stamp (imp.)	9998	1280	Clyde	2155	1907	A. F. Embury & Son	Brussels (R.R. No. 5)	F. 1914	2
Lothian Type (imp.)	8914	756	Clyde	1364	1906	Jas. Parr	Brussels	F. 1914	1
Silk Vail	2225	2563	St. Br.	3235	1909	Peter Scott	Brussels	F. 1916	2
Royal Artist	....	177	Grade	709	1908	R. L. Taylor	Brussels (R.R. 2)	F. 1916	3
Pathfinder (imp.)	15330	3880	Clyde	1035	1912	W. T. Colwill	Centralia	F. 1916	1
Prince of Carrick (imp.)	17249	4756	Clyde	5133	1915	W. T. Colwill	Centralia	F. 1916	1
Lamberton Hero (imp.)	11463	3831	Clyde	4317	1908	R. T. Luker	Centralia	S. 1915	1
Rio Grande (imp.)	14940	2180	Clyde	2863	1907	Archibald Dale	Clinton	F. 1914	1
Balmerino (imp.)	11579	3459	Clyde	3903	1907	William Fear	Clinton	F. 1914	1
Shawhill King (imp.)	....	2086	Grade	2811	1908	B. B. Stephenson	Clinton	F. 1916	3
Seagull Danegelt	....	302	Grade	1420	1906	O. R. Forster	Clinton	F. 1914	3
Red Franklin	1117	2780	St. Br.	3034	1903	J. J. McCaughey	Clinton	F. 1914	2
Charming Prince (imp.)	11477	1601	Clyde	2577	1909	Jas. Cockwill	Crediton	S. 1916	2
Tatler (imp.)	14584	1656	Clyde	2571	1910	Eli King	Crediton	F. 1916	1
Rex Downing	1642	3855	St. Br.	4447	1909	Mrs. Jas. Hannan	Dashwood	F. 1916	1
Harry Bars	1804	3299	St. Br.	3781	1904	Jonas Hartleib	Dashwood	F. 1914	2
Humide (imp.)	1480	376	Per.	524	1907	Wm. Witzel	Dashwood (R.R. 3)	F. 1914	1

* Horse requires inspection.

HURON COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
French Giron (imp.)	3542	2348	Per.	2838	1909	Isaiah Tetreau	Dashwood (R.R. 2)	F. 1916	2
Sir Otto	13636	68	Clyde	1002	1910	Edmund Walper & P. Eisenbach, Dashwood		F. 1916	1
King's Arms (imp.)	6117	493	Clyde	1320	1904	Willis & Guenther	Dashwood	S. 1914	1
Electric B.	....	4967	Grade	5341	1907	T. M. McLean	Dungannon	S. 1917	3
Marquis	....	2008	Grade	2759	1908	T. M. McLean	Dungannon	S. 1917	3
Red McKinney	1002	1151	St. Br.	1688	1905	James Berry	Egmondville	S. 1913	1
Cedric King (imp.)	16340	3873	Clyde	4251	1913	Thos. Vodden	Ethel	F. 1916	1
Kiosque (imp.)	3195	3616	Per.	3971	1910	Thos. Vodden	Ethel	F. 1916	1
Willie Groverland	....	3615	Grade	4	1904	Edward Wood	Ethel	F. 1914	3
Clan MacGregor (imp.)	5566	1335	Clyde	1717	1897	Samuel Baskerville	Exeter	F. 1914	1
John Smollett	1419	3263	St. Br.	2814	1905	H. H. Brown	Exeter (R.R. 3)	F. 1914	1
Lord of the Manor	1418	3264	St. Br.	2815	1892	H. H. Brown	Exeter (R.R. 3)	F. 1914	1
Diamond Cup (imp.)	12100	1323	Clyde	1865	1910	Fred Ellerington	Exeter	S. 1916	1*
Joe Hal	....	4635	Grade	4931	1909	Melvin Johnson	Fordwich	S. 1916	3
Albion's Glory (imp.)	8732	2546	Clyde	3099	1906	Daniel Schwandt	Fordwich	S. 1914	1
Blagdon Stonewall (imp.)	1066	2000	Shire	1998	1904	Geo. J. Ferguson	Goderich	S. 1913	1
Glenlivet Chief (imp.)	6077	2278	Clyde	2756	1903	Aaron & Ezra Fisher	Goderich (R.R. 4)	F. 1914	1
Star Brino	....	4840	Grade	5367	1914	A. J. Goldthorpe	Goderich	S. 1917	3
The Eel	....	4596	Grade	5054	1911	Sterling McPhail	Goderich	S. 1916	3*
Walter Eddy	958	1776	St. Br.	1427	1908	A. M. Polly	Goderich	F. 1916	1
Aidin	....	3457	Grade	3072	1901	R. C. Postlethwaite	Goderich	S. 1915	3
Tommy Bars	1053	2422	St. Br.	2908	1907	Albert Stevenson	Goderich	F. 1914	1
Baron Lorn Jr.	....	1239	Grade	1945	1907	E. Krohn	Gorrie	S. 1915	3
Cobourg	523	1436	Thor.	2138	1897	Henry Bierling & J. J. Miller	Hay	F. 1914	1
Scottish Gem (imp.)	12560	1630	Clyde	2648	1909	John J. Miller	Hay	F. 1916	1
Attractive Prince (imp.)	16471	3922	Clyde	4359	1901	W. J. Cooper	Henfryn	S. 1915	1
Andy Red Lac	....	4458	Grade	4921	1909	T. J. Berry & H. Bossenburg	Hensall	S. 1916	3
Colonel Graham (imp.)	9235	1370	Clyde	2331	1902	T. J. Berry	Hensall	S. 1915	1
Commodore (imp.)	9596	1681	Clyde	2284	1907	T. J. Berry	Hensall	S. 1915	1
Jabot (imp.)	3139	1369	Per.	2332	1909	T. J. Berry	Hensall	F. 1916	1
King Thomas (imp.)	9254	1366	Clyde	2330	1902	T. J. Berry	Hensall	S. 1915	1
Nard (imp.)	6382	4936	Per.	5444	1913	T. J. Berry	Hensall	S. 1917	1
Roadmaster Jr.	....	2344	Grade	3071	1904	T. Murdock	Hensall	S. 1915	3
Pearl Gift (imp.)	16085	3296	Clyde	3157	1904	John Hanna	Kirkton	F. 1914	1
King John (imp. in dam)	17226	4363	Clyde	4887	1913	W. H. Kay	Kirkton	S. 1916	1*
Mosstrooper Champion (imp.)	3346	2991	Clyde	755	1900	Wm. W. Vodden	Londesboro'	S. 1914	1
Bridgebank Blend (imp.)	11102	540	Clyde	1540	1908	Alex. Anderson	Lucknow	S. 1915	1

Sir Hector of Westfield (imp.)	14060	533	Clyde	948	1907	Thos. Inglis	Lucknow	F. 1914	1
Happy Jack	16508	4716	Clyde	5134	1914	Geo. Swan	Lucknow	F. 1916	1
Mascot's Heir	11115	4328	Clyde	4172	1908	Jas. Forster	Lucknow	S. 1916	1
Moulton William (imp.)	1065	2046	Shire	1647	1900	Richard Twamley	Lucknow (R.R. 7)	F. 1914	1
Ruby's Choice	....	3610	Grade	3201	1907	Jas. Cummings	Monkton	F. 1914	3
Nile Boy	....	4661	Grade	5084	1913	Arthur Jones	Nile	S. 1916	3*
Eel 2nd	....	3484	Grade	3876	1911	Thos. J. Hall	Parkhill (R.R. 8)	F. 1916	3
Signalman	8970	903	Clyde	1569	1907	John Campbell	Seaforth (R.R.1)	F. 1914	1
Jay Medium	1071	2629	St. Br.	2741	1904	R. B. Govenlock	Seaforth	F. 1914	1
Sandy Favourite	17042	4239	Clyde	4707	1913	Archie Kerr	Seaforth (R.R. 1)	F. 1916	1
Jim Sphinx	....	4552	Grade	4978	1911	G. R. McCartney	Seaforth	S. 1916	3*
Colonel Bowers	19005	4522	Clyde	5025	1913	Thos. McMichael & Son	Seaforth	S. 1916	1*
Glen Rae	8353	1311	Clyde	1935	1907	Thos. McMichael & Son	Seaforth	F. 1914	1
Honest Tom	16841	4969	Clyde	5347	1915	T. J. McMichael	Seaforth	S. 1917	1
International	14969	3653	Clyde	3439	1912	Thos. McMichael & Son	Seaforth	S. 1916	1*
Lord Ronald	11414	1376	Clyde	1936	1909	Thos. McMichael & Son	Seaforth	F. 1916	1
Huron Gem	17489	4970	Clyde	5348	1915	Thos. McMillan	Seaforth	S. 1917	1
Dunure Gartley	9221	97	Clyde	704	1908	G. W. Nott	Seaforth	S. 1917	1
Todd Winters	2337	4785	St. Br.	5304	1914	Robt. M. Pinkney	Seaforth	S. 1917	1
Willow City	16959	4185	Clyde	4664	1912	J. W. Elliott	Varna	F. 1916	1
Raisuli	8419	3442	Clyde	3647	1908	John Sparrow	Varna	F. 1916	1
Cumberland Gem (imp.)	13978	1367	Clyde	2329	1910	John J. McGavin	Walton (R.R. 2)	F. 1916	1
Royal Jimmie	5217	1890	Clyde	1918	1903	Thos. P. James	Wingham (R.R. 2)	S. 1915	1
Decorate	....	4961	Grade	5460	1913	Geo. M. Robertson	Wingham (Box 75)	S. 1917	3
Mascot Baron	18032	4954	Clyde	5167	1915	Isaac Wright	Wingham	F. 1916	1
Mack Wilkes	....	2114	Grade	2771	1909	Daniel Coward	Woodham (R.R. 1)	F. 1916	3
Kingsmount (imp.)	16025	3081	Clyde	3640	1908	George Coward	Woodham	F. 1916	1
King Gartly	9503	2664	Clyde	3161	1908	J. E. Creery	Woodham	F. 1916	2
Ivory's Joy	15417	3920	Clyde	4233	1913	Jas. Bell	Wroxeter	S. 1917	1
Scotch Bobbie	15754	3898	Clyde	4389	1912	G. W. Gibson	Wroxeter	F. 1916	1
Richard Wilkes	....	4890	Grade	5060	1909	Reuben Sanburn	Wroxeter	S. 1917	3
Ledoro	2196	2702	St. Br.	3064	1909	John Baker	Zurich	F. 1916	1
Non Parole	840	624	St. Br.	1463	1900	Edward Bossenbury	Zurich	F. 1914	1
Radigull Jr.	....	3363	Grade	3796	1907	Asurich Brisson & Jas. Masse	Zurich	F. 1914	3
Southport (imp.)	347	806	Shire	1758	1899	Wm. Callfas	Zurich	F. 1914	1
Peter Nordine	....	4886	Grade	5432	1915	John Decker, Jr.	Zurich	S. 1917	3
Silver McKinney	1860	3597	St. Br.	3965	1907	Oliver Cabana, Jr.	Buffalo, N.Y.	F. 1914	2
						R. T. Dunlop, Manager	Zurich		
Emperor McKinney	1653	4075	St. Br.	4341	1909	J. J. Merner	Zurich	F. 1916	1
Prince George	....	3656	Grade	3986	1903	R. F. Stade	Zurich	F. 1914	3
Mr. Templeton	1010	2139	St. Br.	2131	1908	Geo. E. Troyer	Zurich (R.R. 1)	F. 1916	2

* Horse requires inspection.

KENT COUNTY.

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Toupet (imp.)	1066	1179	Per.	10	1905	John E. Doolittle	Bear Line (R.R. 1)	F. 1914	1
Regal Chattan	9642	41	Clyde.	41	1909	Elam Hind	Bear Line	S. 1917	1
Black Prince	968	902	Shire	1597	1910	Brush Brothers	Blenheim	S. 1916	1*
Marchfield Baron (imp.)	8432	868	Clyde.	1637	1904	Norman Cooper	Blenheim, Box 160	F. 1914	1
Brilliant	779	1643	Per.	2493	1901	Rufus Earl	Blenheim	S. 1916	1
Earl Fife (imp.)	11581	1250	Clyde.	2030	1908	David McLeod	Blenheim	F. 1916	1
Gearing Boy	1363	3316	St. Br.	3514	1910	Sparham Brothers	Blenheim	F. 1916	1
Amiral (imp.)	3611	1757	Per.	28	1903	Henry Brewer	Bothwell	F. 1912	1
Cresslight	2098	4648	St. Br.	26	1906	R. H. Johnson	Bothwell	F. 1914	2
Gearing	918	1756	St. Br.	29	1900	Henry Brewer	Bothwell	F. 1912	1
Hartland's Favorite	5727	3023	Clyde.	27	1905	A. H. Patterson	Bothwell	F. 1914	1
Lord Lochinvar	18741	4743	Clyde.	5148	1914	Robt. W. Knister	Cedar Springs	F. 1916	1
Oaklands Pride	10308	772	Clyde.	1487	1909	W. R. McGuigan	Cedar Springs	F. 1916	1
Oulton Lowe Model (imp.)	1212	4054	Shire	4591	1906	Dell Drury	Charing Cross	S. 1915	1
Atri Bells	936	1495	St. Br.	5	1901	George Wright	Charing Cross	F. 1912	1
Wilkie Todd	648	3694	St. Br.	3909	1911	C. Bechard	Chatham	F. 1916	1
Libidineux (imp.)	3854	2872	Per.	3383	1911	Reuben Brend	Chatham	S. 1916	1*
The Great Widower	1681	4406	St. Br.	4932	1913	A. D. Chaplin	Chatham	S. 1916	1*
Great Onward	1400	3824	St. Br.	4364	1908	A. D. Chaplin	Chatham	S. 1915	1
Highland King	11906	1257	Clyde.	2012	1910	John Jinks	Chatham (R.R. 1)	S. 1916	1*
Lord Fisher	....	300	Grade	1402	1897	Alfred Dingman	Chatham, 58 Adelaide	F. 1914	3
Ixode (imp.)	3141	1371	Per.	2333	1908	James Downie	Chatham	S. 1917	1
Duke of Carruchan	....	4771	Grade	5366	1914	James Gordon	Chatham	S. 1917	3
Grand Allerton	716	32	St. Br.	6	1905	John Hales	Chatham	F. 1914	1
Belquet	5199	4585	Per.	4981	1912	McGarvin Brothers	Chatham	S. 1916	1*
Fringant	3430	3416	Per.	3873	1910	McGarvin Brothers	Chatham	S. 1917	2
Frinlett	5200	4775	Per.	5385	1914	McGarvin Brothers	Chatham	S. 1917	1
Mignon	786	3415	Per.	3872	1904	McGarvin Brothers	Chatham	F. 1914	1
Normand	3510	4289	Per.	4040	1912	McGarvin Brothers	Chatham	S. 1916	1*
Vaillant	3511	4288	Per.	4039	1912	McGarvin Brothers	Chatham	S. 1916	1*
Alto Dewey	935	2724	St. Br.	3193	1907	D. McLachlan	Chatham	F. 1914	2
McClellan	3340	3658	Per.	4034	1912	Samuel McSmyth	Chatham	F. 1916	1
Wild Brino Custer	....	3172	Grade	2747	1906	Maurice O'Neil	Chatham	F. 1914	3
Wild Bars	1062	2488	St. Br.	1929	1900	Fred Willmore	Chatham, Gen. Del.	S. 1913	1
Black Porte	1896	3103	Per.	2156	1909	Jas. R. Cook	Coatsworth (R.R. 1)	F. 1916	1
Sam	....	3402	Grade	3862	1908	Peter Letourneau	Dover Centre (R.R. 1)	S. 1915	3

Royal Major	13590	3305	Clyde.	2452	1911	John Campbell	Dresden	S. 1916	2*
Huit (imp.)	1597	1583	Per.	601	1907	Jos. H. & John A. Carr	Dresden	F. 1914	1
Darrien	377	3976	St. Br.	4055	1908	J. H. Elgie	Dresden	F. 1916	1
Walpole Lad	8836	405	Clyde.	603	1907	Jos. Elgie & Son	Dresden	F. 1914	1
Victor Forbes	....	2576	Grade	3199	1910	John Graham	Dresden	F. 1916	3
Logan O.	734	404	St. Br.	598	1902	N. C. Houston	Dresden	F. 1912	1
King George	....	3049	Grade	3589	1912	W. H. Racher	Dresden (R.R. 3)	F. 1916	3
George Black	....	4275	Grade	4723	1905	Levi Tetreault	Dubuque	F. 1915	3
Sir Archie	11508	1899	Clyde.	2500	1910	G. E. Atkinson	Merlin (R.R. 4)	F. 1916	1
Archer	3300	1318	Per.	1894	1910	J. L. B. Gardiner	Merlin (R.R. 1)	F. 1916	1
Colonel Steel	....	666	Grade	8	1907	Calvin T. Marriott	Merlin (R.R. 2)	F. 1914	3
Jarreux (imp.)	3837	3197	Per.	3535	1909	F. H. Middleton	Merlin	F. 1916	1
Lost Heir	13352	2826	Clyde.	3356	1911	Alex. Osborne	Merlin (R.R. 4)	F. 1916	1
Correct	3609	2951	Per.	1890	1906	J. W. Tackaberry	Merlin	F. 1914	1
Peswick Freeman	....	2985	Grade	2064	1904	Alex. Houston	Merlin	S. 1915	3
Bourbon	....	190	Grade	301	1900	Jas. Johnston	Morpeth	F. 1914	3
Jouy (imp.)	3821	3104	Per.	3420	1909	Geo. D. Ferguson	Muirkirk (R.R. 1)	F. 1916	1
Colchester Boy	18895	4795	Clyde.	5364	1914	Alex. Campbell	Mull	S. 1917	1
Essex Pride	18894	4794	Clyde.	5363	1914	Alex. Campbell	Mull	S. 1917	1
Kaboulot (imp.)	3079	1285	Per.	2001	1910	J. G. Pinder	Mull	F. 1916	1
Louis	....	160	Grade	1292	1904	Robert Timbers	North Buxton	F. 1914	3
Kilkerran (imp.)	4296	42	Clyde.	42	1898	Lesley Johnston	Northwood	F. 1912	1
Victor Hugo	783	855	Per.	1776	1898	Matthew E. Miller	Northwood (R.R. 3)	S. 1914	1
Courbide	775	4604	Per.	4035	1906	Nap. Bourdeau	Paincourt	F. 1914	1
Young Joyeux	....	2558	Grade	1476	1908	Edward Caron	Paincourt	F. 1916	3
Joseph	3561	1905	Per.	2431	1910	Napoleon Caron	Paincourt	F. 1916	1
Wild Brino Jr.	....	2561	Grade	2025	1898	Chas. Crowe	Prairie Siding	F. 1911	3
King's Cupbearer (imp.)	9935	1608	Clyde.	2111	1907	R. G. Buchanan	Ridgetown	S. 1915	1
Sunbeam Junior	15159	2831	Clyde.	3323	1911	Alvin Murray	Ridgetown	S. 1916	1*
Lloyd George	823	626	St. Br.	1	1908	R. C. Coates	Thamesville	F. 1916	1
Kerjolla	1341	3075	St. Br.	3540	1911	Cryderman & Ferguson	Thamesville	F. 1916	1
Earl of Chester	930	2236	St. Br.	71	1902	C. M. McCall	Thamesville	F. 1912	1
Gold Ring Jr.	6744	310	Mor.	38	1898	John Mowbray	Thamesville	F. 1912	1
Jack Dillard	....	4919	Grade	5452	1910	William Pickard	Thamesville	S. 1917	3
Royalist of Drumlanrig (imp.)	12584	1167	Clyde.	1406	1909	Selton Clydesdale Co.	Thamesville	S. 1917	1
Hurleur (imp.)	1599	1081	Per.	2	1907	Thamesville Percheron Horse Breeders' Assn.	Thamesville	F. 1914	1
Brown Gem	805	1070	St. Br.	355	1905	L. Perley Cottingham	Tilbury	F. 1914	1
The Farmer's Friend	....	3111	Grade	3645	1909	Henry Trudell	Tilbury	F. 1916	3
Keltic	845	616	St. Br.	602	1900	F. R. Burns	Tupperville	F. 1912	1
Barrow Tom	878	3076	Shire	3614	1911	Clifford & Wesley Hardick	Tupperville	F. 1916	1

* Horse requires inspection.

KENT COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Acares	....	2001	Grade	590	1902	Edward Huff	Tupperville	F. 1912	3
Jours (imp.)	4013	4499	Per.	4431	1909	Richard Rosebrugh	Turnerville	F. 1916	1
Ivory's Sensation	16557	4774	Clyde.	5262	1914	S. J. Harper	Wallaceburg	S. 1917	1
Right Again	8556	37	Clyde.	588	1908	S. J. Harper	Wallaceburg	F. 1916	1
Baron O'Brogie	13985	549	Clyde.	1599	1910	Harrett & Shaw	Wallaceburg (R.R. 2).	S. 1917	1
Charles Derby Jr.	900	1096	St. Br.	605	1904	Louis Jackson	Wallaceburg	F. 1912	1
White Diamond	....	4765	Grade	5302	1911	Joseph Lucier	Wallaceburg	S. 1917	3
Arnim	....	3704	Grade	4053	1911	P. J. Vanesbroeck	Wallaceburg	F. 1916	3
Mineer	....	3703	Grade	4054	1911	P. J. Vanesbroeck	Wallaceburg	F. 1916	3
Brist	....	3157	Grade	3523	1903	John Goodison	Wheatley	S. 1915	3
Dick Bennett	3093	3699	Per.	3999	1912	J. G. Renwick & Sons	Wheatley	F. 1916	2
Roubaix	4108	4315	Per.	4911	1913	J. G. Renwick & Sons	Wheatley	S. 1916	1*
Harrison (imp.)	1391	1483	Per.	2445	1907	Herman Smith	Wheatley	F. 1914	1

LAMBTON COUNTY.

King's Frolic (imp.)	12586	1307	Clyde.	1944	1910	W. B. Annett	Alvinston (R.R. 2)	F. 1916	1
Dunure David (imp.)	13674	1256	Clyde.	2018	1910	Wm. D. Benstead	Alvinston	F. 1916	1
Lauriston Pride (imp.)	11801	1393	Clyde.	2301	1905	Wm. D. Benstead	Alvinston	S. 1913	1
Brave Wallace (imp.)	9886	3970	Clyde.	3211	1906	Campbell Brothers	Alvinston (R.R. 5)	S. 1915	1
Lord of Fife	14843	1479	Clyde.	2375	1909	Campbell Brothers	Alvinston	F. 1916	1
Alvinston	....	4556	Grade	50	1914	W. A. McLean	Alvinston	S. 1916	3*
Togo B.	872	566	St. Br.	356	1906	Owen McNally	Alvinston	S. 1915	1
High Ross	897	1341	St. Br.	1374	1903	J. B. McColl	Arkona	S. 1914	1
Keir Prince	14487	1410	Clyde.	2326	1911	F. J. Baynton	Bothwell (R.R. 2)	F. 1916	2
Parkside Major	877	437	Shire	842	1909	John F. Burr	Brigden	F. 1916	1
Viscount Tynedale	11881	424	Clyde.	742	1906	Geo. Nicol	Brigden	F. 1914	1
Bombie's Footprint	14247	2882	Clyde.	3457	1912	John Poland	Brigden	F. 1916	1
Local Option	....	1037	Grade	850	1904	Jas. P. Taylor	Brigden	F. 1912	3
Lavender 2nd	4536	422	Clyde.	733	1904	Wm. S. Tucker	Brigden	F. 1912	1
Harold Sphinx	....	2091	Grade	843	1909	C. C. Watson	Brigden	S. 1917	3
Canadian Prince	10763	2972	Clyde.	1021	1908	Frank Holling	Camlachie	F. 1916	1
Gay Laddie	15680	3753	Clyde.	4356	1913	Frank Holling	Camlachie	F. 1916	1
Bramhope Pilgrim (imp.)	9326	1293	Clyde.	1968	1898	Angus McKinlay	Camlachie (R.R.2)	S. 1915	1

Prince Elders	14103	4401	Clyde.	4874	1912	Thos. Parker	Camlachie	S. 1916	1*
Silver Star	14102	4400	Clyde.	4873	1912	Thos. Parker	Camlachie	S. 1916	1*
Young Barongale	1379	2973	St. Br.	3444	1911	Fred Wilson	Camlachie	F. 1916	1
Woodrow Wilson	2298	4727	St. Br.	5129	1914	John W. Wilson	Camlachie	F. 1916	1
Copleston	....	3589	Grade	1017	1902	Jas. L. Salisbury	Copleston	F. 1914	3
Chester Prince (imp.)	7153	2084	Clyde.	2805	1899	Angus A. McAlpine	Croton	F. 1914	1
Altabel	1820	4645	St. Br.	4043	1912	Malcolm McAlpine	Croton	S. 1917	2
King Junior (imp.)	1068	2857	Shire	2642	1908	Johnston Brothers	Croton	S. 1916	1
Prince Charles of Lambton	1220	4738	Shire	5156	1914	Johnston Brothers	Croton (R.R. 1)	F. 1916	1
Gogo (imp.)	1581	403	Per.	596	1906	Garnet T. Delve	Dresden	F. 1914	1
King's Mint (imp.)	13176	1165	Clyde.	1482	1907	Henry Mawlam	Florence (R.R. 3)	F. 1914	1
Aurelian (imp.)	18325	4696	Clyde.	5130	1912	Brandon Brothers	Forest	F. 1916	1
Baron Gartly (imp.)	4709	83	Clyde.	549	1900	Brandon Brothers	Forest	F. 1912	1
Dunure Gulf Stream (imp.)	16859	4005	Clyde.	4578	1910	Brandon Brothers	Forest	F. 1916	1
Herminius (imp.)	14476	1305	Clyde.	1947	1908	Brandon Brothers	Forest	S. 1917	1
Rosyth (imp.)	18326	4697	Clyde.	5131	1914	Brandon Brothers	Forest	F. 1916	1
Baron Currie (imp.)	7734	608	Clyde.	715	1902	Brandon Bros. & Kingston	Forest	F. 1912	1
Gay Pride	17446	4867	Clyde.	5318	1915	William Gilliard	Forest (R.R. 1)	S. 1917	1
Ainsworth (imp.)	7694	813	Clyde.	1877	1903	Kingston & Skinner	Forest	F. 1914	1
Baron Revoit	17471	4730	Clyde.	5132	1915	A. Watson & Sons	Forest	F. 1916	1
Model's Best	749	4656	Hack.	5040	1913	A. Watson & Sons	Forest	S. 1916	1*
Tanton	1206	2959	St. Br.	3507	1911	W. L. Fraser	Forest	S. 1917	1
Gamey	....	2452	Grade	3143	1902	Frank Geromette	Grand Bend	S. 1915	3
Prince Ronald (imp.)	5367	2072	Clyde.	2728	1903	Walter Brown	Inwood	F. 1914	2
Major Sensor	1340	3036	St. Br.	3542	1902	J. W. Johnston	Inwood	F. 1914	1
Hillhead King (imp.)	15478	2957	Clyde.	3488	1911	George S. Silk	Inwood	F. 1916	1
Lord Oswald (imp.)	8671	54	Clyde.	327	1907	Jas. T. Smillie	Inwood	F. 1914	1
Plebiscite	....	1225	Grade	1985	1899	Bert Cruickshank	Mooretown (R.R. 1)	F. 1914	3
Bute Darnley (imp.)	10348	1434	Clyde.	2104	1908	Trott Brothers	Oil City	F. 1916	1
Bailey	1217	4857	Shire	5311	1914	Thos. Bailey	Oil Springs	S. 1917	1
Bonnie Basset	....	1227	Grade	1980	1900	John H. McClure	Oil Springs	S. 1915	3
Young Darnley	....	2510	Grade	3215	1897	Thos. Naylor	Oil Springs	S. 1916	3
Porta	1887	4548	St. Br.	4927	1913	Thos. H. Eady	Petrolia	S. 1916	1*
MacKinnon	....	1043	Grade	1685	1904	Wm. Hendy	Petrolia (R.R. 3)	F. 1912	3
Grandeur's Heir	2838	3489	Clyde.	2620	1900	Amois Kerr	Petrolia	F. 1914	1
Jack Wilson	2016	1042	St. Br.	1020	1908	J. W. Kerr	Petrolia	F. 1916	1
Sagamore	14983	3319	Clyde.	3774	1910	Maw & Marshall	Petrolia	F. 1916	1
Bourbon Mann	....	3781	Grade	4230	1910	Mrs. Chas. Owen	Pt. Edward	S. 1916	3*
Brino Winters	....	1706	Grade	2568	1910	Edward Humphries	Port Franks	F. 1916	3
St. Patrick	2862	567	Per.	388	1900	William Barnes	Sarnia	F. 1912	1
Sir Robert L.	1827	4399	St. Br.	4866	1913	W. H. Haney	Sarnia	S. 1916	1*

*Horse requires Inspection.

LAMBTON COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Nello	....	2554	Grade	119	1907	W. H. Haney	Sarnia	S. 1916	3
King Easy (imp.)	7853	728	Clyde.	1024	1906	D. W. James	Sarnia	F. 1914	1
Dunbarton	3654	3089	Clyde.	1012	1899	Neil Maitland	Sarnia (R.R. 2)	F. 1912	1
Macqueen's Model	6576	459	Clyde.	1331	1906	Ed. Powers	Sarnia	F. 1914	1
Bingen Simon	....	4714	Grade	5160	1915	John E. Dupuis	Sombra	F. 1916	3
General Bruce	11278	402	Clyde.	595	1910	John E. Dupuis	Sombra	F. 1916	1
Pride of Warwick	12119	829	Clyde.	1921	1910	Rory Henry	Sombra	F. 1916	1
Blacon King (imp.)	11686	4243	Clyde.	3243	1908	Crawford & McLachlan	Thedford	F. 1916	1
Clandeboye Godolphin	14794	4526	Clyde.	4864	1912	Henry Curts	Thedford	S. 1916	1*
Inca MacGregor	11404	4262	Clyde.	4726	1912	William Rumford	Thedford	F. 1916	1
The Orphan	....	3828	Grade	4007	1904	Robt. C. Stevenson	Thedford	F. 1914	3
Fil D'Or	3509	2660	Per.	3218	1910	Chas. Osier	Walkers	S. 1916	1*
Laborimedo	15157	3765	Clyde.	3995	1911	Geo. Buckingham	Wallaceburg	F. 1916	1
Joney (imp.)	3035	2786	Per.	611	1909	John Buckingham	Wallaceburg	F. 1916	1
Herbier (imp.)	2202	278	Per.	1025	1907	David Shannon & Co.	Wanstead	F. 1914	1
Millcraig Duke (imp.)	15669	3026	Clyde	2498	1904	Robt. Campbell	Watford	F. 1914	1
Jay Bars	....	4090	Grade	4617	1910	Neil A. Fair	Watford (R.R. 8)	F. 1916	3
John Whitley	1813	4478	St. Br.	4936	1914	Gordon Hollingworth	Watford	S. 1916	1*
Royal Argyle (imp.)	12555	700	Clyde.	1008	1909	Emerson Kilmer	Watford	F. 1916	1
Baron's Jim	8488	66	Clyde.	1010	1906	Wm. P. Reid	Watford	F. 1914	1
Urbain (imp.)	1591	3542	Per.	2534	1905	David Skillen	Watford	S. 1914	1
King George	11844	1689	Clyde.	2050	1909	John W. Dawson	Wilkesport	S. 1916	1
King David	4985	401	Clyde.	589	1903	Joseph Hayward	Wilkesport	F. 1912	1
Prince Albert	1198	4382	Shire	4792	1913	F. Pretty	Wilkesport	S. 1916	1*
Lothian's Brand (imp.)	10083	1693	Clyde.	1886	1903	Ben Bryson	Wyoming	F. 1914	1
Diana's Chief (imp.)	14446	874	Clyde.	1652	1906	Charles King	Wyoming	F. 1914	2
Earl Dudley (imp.)	12453	623	Clyde.	1013	1909	Hugh McLean	Wyoming	F. 1916	1
My Direct	065	3377	St. Br.	3607	1905	F. R. Page & A. Brent	Wyoming	F. 1914	1
Prince McKinney	....	4631	Grade	5046	1913	Hugh Montgomery	Wyoming	S. 1916	3*

LANARK COUNTY.

Gartly Pride 2nd	16181	4173	Clyde.	4654	1911	W. R. More	Almonte	F. 1916	1
King's Champion (imp.)	13174	343	Clyde.	280	1903	T. & H. Goodfellow	Almonte	F. 1912	1
Baron Gibson	14478	3247	Clyde.	673	1910	Wm. J. Graham	Almonte (R.R. 3)	F. 1916	1

Hypocras	1154	10	Per.	25	1907	Wm. Khull	Almonte	F. 1914	1
Elrig of Kenmore	17429	4895	Clyde.	5271	1915	John Stewart	Appleton	S. 1917	1
Young Schiehallion	....	1224	Grade	1987	1905	Wm. G. Craig	Brightside	F. 1914	3
Cashel Lad	12775	1934	Clyde.	2412	1911	W. A. Nichols	Carleton Place	F. 1916	1
Samson	....	255	Grade	671	1909	Wm. Poole	Carleton Place (R.R. 1)	F. 1916	3
Young Sir Ned	....	257	Grade	675	1907	Robt. Pressley	Carleton Place	F. 1914	3
Phonograph II	....	4287	Grade	873	1908	Wm. A. Robertson	Carleton Place	F. 1916	3
Prairie Rocket	....	115	Grade	23	1908	David Barr	Clayton	S. 1915	3
Joyeux (imp.)	3977	2999	Per.	3499	1909	Wm. Kidd	Franktown	F. 1916	1
Young Killarney	....	2231	Grade	2435	1910	Thos. A. Conroy	Lanark (R.R. 3)	S. 1916	3*
Symmetry's Hero	....	222	Grade	24	1907	Jas. Legary	Lanark	F. 1914	3
Tregarthon (imp.)	309	482	Hack.	751	1902	Robt. White	Lanark, Box 148	F. 1914	1
Young Schley	....	2799	Grade	3322	1910	Henry Pratt	Maberly	F. 1916	3
Concord Mac	10413	4545	Clyde.	5019	1907	W. B. Yuill	Maberly	S. 1916	1
Belmont	9811	823	Clyde.	1906	1908	Pierce Murphy	Merrickville	F. 1916	1
Pioneer	7929	407	Clyde.	643	1906	Geo. B. Taylor	Middleville	F. 1914	1
Baltimore (imp.)	332	2182	Hack.	2644	1903	Thos. N. Bowes	Pakenham	F. 1914	1
Baron Rowena 2nd	15255	4426	Clyde.	4748	1913	Chas. Russell	Pakenham	S. 1916	1*
Billy Shirden	....	4988	Grade	5476	1911	R. M. Powers	Perth	S. 1917	3
King o' the Barons	....	4816	Grade	5361	1914	Neil T. Blair	Perth	S. 1917	3
Tom Millerton	721	4052	St. Br.	4517	1907	T. J. Devlin	Perth	S. 1915	1
Johnnie Canuck	16031	1829	Clyde.	16	1902	J. & J. Ebbs	Perth (R.R. 2)	F. 1912	1
Hoqueton (imp.)	1558	543	Per.	376	1907	Thos. H. Ireton	Perth	F. 1914	1
Mono Prince	....	4981	Grade	5443	1911	Allan Grant	Perth	S. 1917	3
Rudgate Squire (imp.)	1052	2108	Shire	2779	1910	John Johnston	Perth (R.R. 4)	F. 1916	1
Patron	....	1195	Grade	703	1908	George A. Jackman	Perth	F. 1916	3
Monomaniac	242	347	St. Br.	662	1902	John A. Kerr	Perth	F. 1912	1
Lanark Hero	6519	2666	Clyde.	1353	1906	Geo. Mathews	Perth	F. 1914	1
Baron Killarney	13366	3738	Clyde.	3719	1911	Wm. McLaren	Perth, Box 59	F. 1916	1
Patron (imp.)	595	1130	Bel. Dr.	2161	1910	Jas. L. P. McLaren	Perth	F. 1916	1
Porther (imp.)	3375	409	Per.	659	1901	Jas. L. P. McLaren	Perth	F. 1912	1
Cecil (imp.)	....	34	Grade	20	1900	Frank McLenaghan	Perth	F. 1912	3
Judge Red	411	2756	St. Br.	658	1900	McMillan Brothers	Perth	F. 1912	1
Border Laird (imp.)	7301	1274	Clyde.	2073	1904	M. McMullen	Perth (R.R. 1)	F. 1914	1
Drummond Chief	2556	1275	Clyde.	3072	1899	M. McMullen	Perth (R.R. 1)	F. 1914	1
Kosaque (imp.)	3255	1380	Per.	2346	1910	M. McMullen	Perth (R.R. 1)	F. 1916	1
Brooklyn Chief	16577	4384	Clyde.	4795	1913	W. A. Bisonette	Smith's Falls	S. 1916	1*
County King Jr.	....	4861	Grade	5424	1909	Benjamin Code	Smith's Falls	S. 1917	3
Bird Peter	1868	4416	St. Br.	4810	1908	A. L. Ferguson	Smith's Falls	S. 1916	1
Aeroplane	591	1137	Hack.	2000	1908	H. S. Hunter	Smith's Falls	S. 1917	1

* Horse requires inspection.

LANARK COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment. No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Bourbon King	....	4333	Grade	4732	1914	H. S. Hunter	Smith's Falls	S. 1916	3*
Brown Acme	13613	3801	Clyde.	4424	1912	John McEwen	Smith's Falls	F. 1916	1
Duke of Montague	19323	4978	Clyde.	5378	1913	John McEwen	Smith's Falls	S. 1917	1
Dalton King Jr.	791	4982	Hack.	5225	1914	John E. Joynt	Smith's Falls	F. 1916	1
Eel Appleby	....	4823	Grade	5409	1911	W. H. Murphy	Smith's Falls	S. 1917	3
Gold Hal	030	36	St. Br.	92	1902	E. Sloan & Company	Smith's Falls	F. 1912	1
Percy Performer 2nd	767	3819	Hack.	4384	1912	Thomas Sloan	Smith's Falls	F. 1916	1
Dappledale Chief	14280	4174	Clyde.	4651	1912	Robert Wills	Smith's Falls	S. 1917	1
Lanark Pride	....	1230	Grade	1974	1905	John Fournier	Snow Road	F. 1914	3
Baron's Heir	12148	1992	Clyde.	78	1910	W. J. Jones	Waba	S. 1917	1
Young Hypocras	....	3059	Grade	3541	1912	Jas. A. Fair	Watson's Corners	F. 1916	3
Johney Farrell	....	4920	Grade	5453	1912	Wm. Farrell	Wemyss (R.R. 1)	S. 1917	3
Curiosity	17029	4807	Clyde.	5248	1914	Duncan Cameron	Wemyss	S. 1917	1

LEEDS COUNTY.

Ruby Glen Prince	18676	4829	Clyde.	5256	1914	Jas. Thompson	Algonquin	S. 1917	1
Twynholm Chief (imp.)	7244	4483	Clyde.	4894	1905	Henry R. Crummy	Athens	S. 1916	1
Prince Royal 2nd	879	4477	Fr. Can.	4831	1910	William Neddo	Athens (R.R. 3)	S. 1916	1*
Generalissimo	1304	2844	St. Br.	3320	1904	Proctor Giffin	Brockville	F. 1914	1
Justo the Great	1988	4591	St. Br.	4980	1913	Proctor Giffin	Brockville	S. 1916	1*
Sidney (imp.)	3582	1172	Per.	1193	1898	Jas. Pearson & Son	Brockville (R.R. 2)	F. 1912	1
Russell Wilkes	....	2256	Grade	2699	1910	John Webster	Brockville	S. 1917	3
Zeneth	....	4821	Grade	5407	1905	Carson Glazier	Fairfield (R.R. 1)	S. 1917	3
Idalion	3917	3942	Per.	4438	1912	Albert Gough	Gananoque (R.R. 2)	F. 1916	1
Gautelet (imp.)	1525	1166	Per.	1469	1906	Percheron Horse Syndicate, W. J. Webb, Sec.	Gananoque	S. 1915	1
Young Schallion	....	680	Grade	134	1905	Thos. Freeman	Jones Falls	S. 1915	3
Fred	....	290	Grade	1369	1902	Wm. H. Cook	Lansdowne	S. 1914	3
Bright Guard (imp.)	13410	3999	Clyde.	4199	1910	Geo. E. Jackson	Lyn	F. 1916	1
Island Hal	....	3534	Grade	74	1905	Robt. H. Tennant	Lyn	F. 1914	3
Black Deal	....	111	Grade	138	1904	Chas. Covey	Lyndhurst	F. 1912	3
Royal George	....	4061	Grade	4570	1905	John T. Slack	Lyndhurst	S. 1915	3
Prince Rideau	....	4708	Grade	5222	1913	Felix McNally	Newboro	F. 1916	3

Percheron William	....	2397	Grade	3113	1904	Mathew Davis	North Augusta	F. 1914	3
Northland Baron	5848	316	Clyde.	 139	1905	Jos. Gainford	Seeley's Bay	S. 1915	1
Leeds Percheron	....	924	Grade	1535	1909	Jas. A. Whitmore	Toledo	F. 1916	3
Lord MacGregor 2nd	16376	4740	Clyde.	5229	1914	James Whitmore	Toledo	F. 1916	1
Bonar Law	....	4877	Grade	5221	1912	D. A. Curtis	Westport	F. 1916	3
Eagle Patch	....	4684	St. Ber.	5104	1913	W. C. Fredenburgh & D. A. Curtis,	Westport	S. 1916	1*
King of the Porter	....	3617	Grade	 132	1908	John F. Mulville	Westport	F. 1916	3
Holdenby Druid (imp.)	535	664	Shire	 136	1905	William Taggart	Westport	F. 1914	1

LENNOX AND ADDINGTON.

Prince Cairndale	13649	1388	Clyde	 58	1910	Asa A. Armstrong	Adolphustown	F. 1916	1
Pomerine	933	3929	St. Br.	4469	1911	J. B. Howell	Bath	S. 1917	1
Ross MacGregor	15203	4042	Clyde	4258	1912	Alfred Milligan	Centreville	F. 1916	1
Joe the Banker Jr.	....	206	Grade	 373	1903	W. R. Cade	Cloyne	F. 1912	3
La Premiere (imp.)	1356	443	Per.	 888	1907	W. S. Fenwick & Son	Enterprise	F. 1914	1
Sir Donald's Pride	13030	1423	Clyde	1662	1910	H. A. Jifkins & E. A. Murphy	Erinsville	S. 1916	1*
Sir John Simpson (imp.)	10910	3074	Clyde	3251	1908	John Stinson	Erinsville	S. 1917	1
Jerry	....	4948	Grade	5465	1911	Jos. Beauderie	Hardwood Lake	S. 1917	3
Golden Prince Jr.	....	238	Grade	 413	1901	John S. McAlister	Marysville (R.R. 1)	F. 1912	3
Rommay (imp.)	4094	1191	Per.	1286	1900	Van Luven Bros. & H. Martin	Moscow	F. 1912	1
Grey Squirrel	1459	150	Per.	 769	1909	Geo. S. Chambers	Napanee	F. 1916	1
John L.	....	4941	Grade	5323	1913	Geo. S. Chambers	Napanee	F. 1916	3
Kleber (imp.)	1390	147	Per.	 705	1898	Geo. S. Chambers	Napanee	F. 1914	1
Sultan (imp.)	2570	146	Per.	 706	1903	Geo. Chambers & C. D. Brown	Napanee	F. 1914	1
Commissioner	....	191	Grade	... 174	1903	John McCumber	Napanee	F. 1914	3
Kipling	17036	4835	Clyde	5324	1914	Wilfred A. Miller	Napanee	S. 1917	1
Oddfellow	....	205	Grade	 415	1909	Norman O'Neil	Napanee	S. 1917	3
Hamlet	181	2301	Hack.	 416	1901	Archibald Parks	Napanee	F. 1912	1
Dick Quintin Jr.	....	4440	Grade	4888	1913	Chester Card	Odessa	S. 1916	3*
Bob Lyon's Trustwell	....	4296	Grade	4807	1913	Gilbert James Wood	Odessa	S. 1916	3*
Soutar Buchlyvie	14906	3965	Clyde.	4124	1912	John McCauley	Roblin	F. 1916	1
Young Duke	....	1201	Grade	 318	1904	George Reed	Sandhurst	F. 1912	3
Abe Dillon	1822	2555	St. Br.	 782	1901	Jos. Bray	Stella	F. 1914	1
Cheri (imp.)	3741	1936	Per	2091	1902	W. H. Preston & A. E. Howard	Stella	S. 1913	1
Gay MacQueen	....	2349	Grade	3066	1900	John Hunter	Tamworth	F. 1914	3
Romulus	....	241	Grade	 457	1910	T. A. Martin	Tamworth	S. 1917	3
Young Saint Nicholas	....	243	Grade	 511	1906	Edward Schoulcraft	Tamworth	F. 1914	3
Dave	....	4929	Grade	5454	1906	John Gilmore	Vennachar	S. 1917	3
Tone	....	4971	Grade	5463	1913	John E. Irish	Vennachar	S. 1917	3

*Horse requires inspection.

LINCOLN COUNTY.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
The Laird	13961	137	Clyde	710	1909	Stanley Young	Caistor Centre	F. 1916	1
Jeantes (imp.)	3251	1922	Per.	562	1909	Annable & Fountain	Grimsby	F. 1916	1
Kinleith Pride (imp.)	12455	2654	Clyde	813	1907	John D. Larkin	Queenston	F. 1914	1
Pilot of Glencairn	15126	3686	Clyde	4152	1912	John D. Larkin	Queenston	F. 1916	1
Meteor	....	3535	Grade	3688	1897	A. D. Middaugh & H. H. Hitchcock	Smithville	F. 1914	3
Bingen Royal	2424	3020	St. Br.	3569	1910	E. B. Durham	Smithville	F. 1916	1
Goble	1386	1377	St. Br.	2225	1905	J. E. Springstead	Smithville	F. 1914	1
Baron Kelton (imp.)	7916	470	Clyde	1052	1907	C. H. Claus & Son	St. Catharines	F. 1914	2
Blacon of Up To Time	12446	2945	Clyde	3510	1911	S. D. Furminger	St. Catharines	F. 1916	1
Young Galiher	....	3808	Grade	4427	1913	J. E. Swartz	St. Catharines	F. 1916	3
Messenger	....	1763	Grade	1053	1902	Thos. Bray	St. Catharines	F. 1912	3
Fritz Bingen	2005	1929	St. Br.	2371	1901	T. A. Crow (J. E. Swartz, Agt.	Toronto St. Catharines)	S. 1915	1
John R. Hal	0100	4805	St. Br.	4773	1907	T. A. Crow	Toronto	S. 1916	1
Siberier's Heir	....	1729	Grade	2462	1907	E. E. Flannigan	Vineland (R.R. 1)	F. 1914	3
Norfolk King	9814	548	Clyde	1585	1908	W. E. Heaslip & J. C. Hill	Wellandport	S. 1915	1
Prince Glancine	3113	689	Per.	876	1910	J. H. Mittlefehldt	Wellandport (R.R. 2)	F. 1916	1

MIDDLESEX COUNTY.

Black Baronet (imp.)	10350	1168	Clyde	999	1908	Chas. Bean & Sons	Ailsa Craig (R.R. 2)	F. 1916	2
Hall Caine (imp.)	13933	2087	Clyde	2813	1909	Chas. Bean & Sons	Ailsa Craig	F. 1916	1
Pentland Pride (imp.)	9552	812	Clyde	1876	1905	Chas. Bean & Sons	Ailsa Craig	F. 1914	1
Lord Howatson (imp.)	10703	843	Clyde	1736	1899	T. W. Hodgson	Ailsa Craig	F. 1914	1
King's Courtier (imp.)	12556	2070	Clyde	2694	1910	Henry McClurg	Ailsa Craig	F. 1916	1
Halfling (imp.)	196	1823	Thor.	2612	1892	Jas. McFarlane	Ailsa Craig	F. 1914	1
Killelland Chief (imp.)	11582	439	Clyde	848	1907	Donald McIntyre	Ailsa Craig	S. 1915	1
Pride of Skeog (imp.)	11687	3926	Clyde	1768	1908	Sidney Morley	Ailsa Craig	S. 1915	1
Young Lacedemone	....	180	Grade	692	1904	Geo. W. Jeffrey	Appin (R.R. 3)	S. 1914	3
Branton Surprise (imp.)	10349	438	Clyde	845	1907	Alex. F. McTavish & Son	Appin	F. 1914	1
Royal Dennis	16364	4551	Clyde	4975	1913	Richard Pettit	Appin	S. 1916	1*
Prince of Roxborough 2nd	15958	1213	Clyde	2095	1909	E. G. Legge	Belmont	F. 1916	1
Golden Dan	....	4473	Grade	4875	1906	John D. McVicar	Belmont	S. 1916	3

Jelly's Favourite	18941	4786	Clyde	5306	1914	Geo. Weir	Belmont	S. 1917	1
Labour (imp.)	3853	2919	Per.	3472	1911	John D. McGregor	Byron	F. 1916	2
Black Rowdy	2387	4975	St. Br.	5245	1914	Ira Bice	Clandeboye	F. 1916	2
Tommy McNamara	7	1627	St. Br.	2386	1903	Edgar Darling	Clandeboye	F. 1914	1
Patchen Wilkes 2nd	646	819	Clyde	1889	1908	Sidney G. Hodgins	Clandeboye	S. 1917	1
Wheel of Fortune	....	3180	Grade	3442	1903	George Young	Clandeboye	S. 1914	3
Bright Star	11536	2060	Clyde	2486	1907	Currie Bros.	Denfield	F. 1914	1
Royal Fortune Count	14239	3909	Clyde	4442	1912	Robert Easton	Denfield (R.R. 4)	F. 1916	1
Dunmore Scotch Mist (imp.)	15198	3001	Clyde	3545	1911	J. M. & H. C. Robson	Denfield (R.R. 1)	F. 1916	1
Cawdor Laird (imp.)	11455	1830	Clyde	2024	1907	Arthur F. O'Neil	Denfield	F. 1914	2
Sidon	4725	1810	Ger. Co.	2380	1905	H. T. Rigney	Denfield	F. 1914	1
King George (imp.)	16024	3083	Clyde	3642	1908	Martin H. Rosser	Denfield	F. 1916	2
Fooshee	1354	4906	St. Br.	5119	1911	James Marr	Dorchester	S. 1917	1
Young Roslin	....	1767	Grade	2268	1905	R. A. Sutherland	Dorchester Sta.	S. 1913	3
Cricklade (imp.)	554	2800	Thor.	2490	1902	W. H. Shore	Glanworth	S. 1913	1
Bobco	....	4804	Grade	5398	1914	Jas. W. Currie	Glencoe	S. 1917	3
Baron Star	10638	2500	Clyde	3054	1910	Geo. Devlin	Glencoe	F. 1916	2
Golden Glow	11275	1918	Clyde	1809	1909	Jas. Gilbert	Glencoe	F. 1916	1
Imperial Royal	2673	494	Per.	1352	1905	W. W. Gordon	Glencoe	F. 1914	2
Silverwood	....	289	Grade	1351	1909	W. W. Gordon	Glencoe	F. 1916	3
Blackband (imp.)	....	25	Grade	1313	1901	D. K. McRae	Glencoe (R.R. 3)	F. 1914	3
Stately Mac	10995	1919	Clyde	1765	1909	D. M. Webster	Glencoe	F. 1916	1
Lauriston's Best	15559	4621	Clyde	5010	1913	Geo. H. McRobert	Granton	S. 1916	1*
Ascot's Heir (imp.)	9646	2380	Clyde	763	1904	Morley Wass	Granton	F. 1914	1
Gladiator 2nd	17237	4348	Clyde	4791	1913	A. M. Dickie	Hyde Park	S. 1916	1*
Chippewayan	264	3724	Thor.	4044	1908	J. B. Carmichael	Ilderton (R.R. 3)	F. 1916	1
Dunure Link (imp.)	13042	1091	Clyde	729	1902	Graham, Long & Paisley	Ilderton	F. 1912	1
King's Court	19050	4882	Clyde	5397	1915	John McIntosh	Ilderton	S. 1917	1
Oaklands Favourite	....	3527	Clyde	3610	1912	G. E. Nixon	Ilderton	S. 1917	1
King's Cupbearer 2nd	15134	2458	Clyde	3159	1911	Thos. Reeve	Ilderton (R.R. 4),	S. 1917	1
Gordon G.	1116	3566	St. Br.	3174	1908	Geo. C. Woolley	Ilderton	S. 1915	2
Hatinal (imp.	1590	4150	Per.	2150	1907	Geo. C. Woolley	Ilderton	S. 1915	1
Grandee's Last (imp.)	13947	913	Clyde	1573	1911	Jas. Petch & Sons	Kerrwood (R.R. 1)	F. 1916	1
Billy Boy	15753	3105	Clyde	3562	1911	B. D. Sells	Komoka	F. 1916	1
Blacon Beau (imp.)	8127	918	Clyde	1588	1904	Thos. Crapp	Lambeth (R.R. 3)	S. 1915	1
Victor	....	4443	Grade	4027	1901	Alex. D. Jackson	Lambeth	F. 1914	3
Pepper Pod	1106	2920	St. Br.	2996	1907	Geo. Banghart	London	S. 1916	1
Wild Mayo	....	4679	Grade	5099	1904	Adam Beck	London	S. 1916	3
Kothorne (imp.)	3004	518	Per.	559	1910	Guest & Wilkinson	London (R.R. 5)	F. 1916	1
Lord Armstrong (imp.)	9309	3809	Clyde	4151	1904	Irwin Harris & Thos. Crapp	London	S. 1915	1

* Horse requires inspection.

MIDDLESEX COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Hygrade	2386	3595	St. Br.	2993	1907	W. A. Jenkins	London	F. 1914	2
Henry Winters	1136	2791	St. Br.	1112	1902	Johnston Brothers	London	F. 1912	1
Matchless McKinney	1137	2789	St. Br.	1133	1905	Johnston Brothers	London	S. 1915	1
Medio McKinney	1138	2790	St. Br.	1134	1906	Johnston Brothers	London	F. 1914	1
The Governor-General	899	3778	St. Br.	1118	1909	Johnston Brothers	London	F. 1916	1
Red Heir	956	2593	St. Br.	1131	1906	Harry Raison, 5 Duke St.,	London	S. 1915	1
Cyknus	2629	2168	Oldenburger	1136	1899	Albert Smith, 1236 Trafalgar	London	F. 1912	1
Dunure Friendship (imp.)	13675	1252	Clyde	2022	1911	Wilkinson & Guest	London (R.R. 5)	F. 1916	1
Hindenburg	1816	4916	St. Br.	5264	1914	Robt. & Ben. Pierce	Longwood	S. 1917	1
Mystic Bell	2023	4318	St. Br.	4922	1910	D. D. Revington	Lucan	S. 1916	1*
True Movement (imp.)	13977	1103	Clyde	2041	1907	Ryan Brothers	Lucan	F. 1914	1
Black Knaught	14261	1935	Clyde	2192	1910	Duncan A. McLean	Melbourne	F. 1916	2
Dell Heart	1705	4724	St. Br.	5144	1914	Geo. Pike	Mossley (R.R. 1)	F. 1916	1
Scottish Coronet (imp.)	12776	1828	Clyde	156	1909	Armin Rossiter	Mossley (R.R. 2)	S. 1917	1
Boavista	2216	4809	St. Br.	5263	1907	C. E. Bateman	Mount Brydges	S. 1917	1
Bepo	....	1777	Grade	2168	1905	G. A. Carruthers	Mount Brydges	S. 1913	3
Barney	....	4926	Grade	5414	1909	W. J. Clark	Mount Brydges	S. 1917	3
Chateauquay Boy	608	3524	Fr. Can.	3757	1905	J. H. Thompson	Mount Brydges	F. 1914	1
Billy Wilkes	....	3531	Grade	3938	1909	Francis H. Waters	Mount Brydges	F. 1916	3
Lord Cedric	16531	3984	Clyde	4294	1912	John Atmore	Parkhill	S. 1917	1
Peter Gumaer	0133	4903	St. Br.	5383	1914	Chas. P. Barrett	Parkhill	S. 1917	1
Peter V. Dillon	1895	4324	St. Br.	4768	1912	Chas. Barrett	Parkhill	S. 1916	1*
Cerus (imp.)	30	1650	Per.	2605	1900	John A. Clark & Hugh Tweedle,	Parkhill	F. 1914	1
Woodlands Performer	68	2156	Hack.	1061	1896	John A. Clark	Parkhill	F. 1912	1
Sir Audubon	....	2617	Grade	2470	1911	Henry Ellis	Parkhill	F. 1916	3
Lord Gray (imp.)	12390	67	Clyde	1007	1910	Andrew Erskine	Parkhill	F. 1916	1
Guelph Performer	89	1163	Hack.	1538	1899	D. A. Graham	Parkhill	S. 1913	1
John D.	6163	4767	Per.	5331	1908	D. A. Graham	Parkhill	S. 1917	1
Dunrobin Darnley	11146	2907	Clyde	1703	1909	Percy Graham	Parkhill	S. 1916	1
Kif-Kif (imp.)	3760	3236	Per.	3710	1910	D. McKenzie & J. W. & H. A. Ross	Parkhill	F. 1916	1
Joe Bars	1005	2138	St. Br.	1978	1906	W. M. McKenzie	Parkhill	F. 1914	1
Baronson	17627	4504	Clyde	4814	1913	J. J. McKichan	Parkhill	S. 1916	1*
Prince Triumph	14796	2216	Clyde	2955	1911	Peter McKinnon	Parkhill	S. 1916	1*
Sir Simon	5406	2551	Clyde	1874	1896	Pumfrey & McIntosh	Parkhill	S. 1915	2
Sir Simon Romeo	16919	4083	Clyde	4612	1912	J. D. McPhee	Parkhill	F. 1916	1

Jasin (imp.)	2335	721	Per.	1280	1909	David Mitchell	Parkhill	F. 1916	1
Eel of the Nile	2026	4666	St. Br.	5082	1913	A. G. Shortt	Parkhill	S. 1916	1*
Lord Rennie (imp.)	8915	1453	Clyde	2210	1906	Wilson Brothers	Parkhill	F. 1914	1
Gatignol (imp.)	1127	118	Per.	781	1906	Elwood Zavitz	Poplar Hill	F. 1914	1
Mamaluke (imp.)	14299	1431	Clyde	2058	1908	Elwood M. Zavitz	Poplar Hill	F. 1916	1
Baron Drumbedden	....	4721	Grade	5143	1912	John Hutcheson	Putnam	F. 1916	3
Pride of Roxburgh	10797	1190	Clyde	1359	1909	John H. & Frank Hicks	Putnam	F. 1916	1
Jr. Kena Democrate	....	2159	Grade	2892	1909	Gordon Aitken	Southwold Station	F. 1916	3
Monotell	1749	4208	St. Br.	4003	1905	Harold Currie	Strathroy	F. 1914	1
King of the Dale	520	2994	St. Br.	3512	1911	J. W. Galsworthy	Strathroy	F. 1916	1
Lacon International	012	2474	St. Br.	2697	1905	Edward P. Howe	Strathroy	F. 1914	1
Bon Voyage	682	4913	St. Br.	5413	1902	Colin McKeigan	Strathroy	S. 1917	2
Lord Marcellus (imp.)	15479	2956	Clyde	3487	1910	Colin McKeigan	Strathroy	S. 1916	1*
Major	....	4883	Grade	5412	1913	Colin McKeigan	Strathroy	S. 1917	3
Sir Romeo	....	1240	Grade	1916	1906	C. McKeigan & L. Knight	Strathroy	F. 1914	3
Togo	211	1268	St. Br.	2031	1903	Colin McKeigan	Strathroy	F. 1914	1
McIntosh Best	17877	1098	Clyde	1497	1912	McIntosh Bros.	Strathroy (R.R. 6)	F. 1916	1
Heather Beau	15964	3392	Clyde	3858	1911	P. A. Campbell & W. McEnteer	Tambling's Corners	F. 1916	1
Airdlie Dix (imp.)	12611	1798	Clyde	2204	1909	Wm. Ardiel	Thorndale	F. 1916	1
Drefus	3282	498	Per.	1109	1898	Joseph Moore	Walkers	F. 1914	1
Unko	183	2265	St. Br.	2894	1905	P. J. Kearns	Wardsville	S. 1914	1
Dunure Acknowledgment (imp.)	8457	1385	Clyde	1113	1906	Robert Brown	Wilton Grove	F. 1914	1
Walter Gearing	910	1395	St. Br.	1392	1908	Robert Brown	Wilton Grove	F. 1916	1
Roving Lad	....	1451	Grade	2212	1909	John Treharne	Wilton Grove	S. 1916	3

NORFOLK COUNTY.

Samson	....	1205	Grade	99	1898	John Finch	Clear Creek	F. 1912	3
Count of Roseberry	109	2992	Hack.	2226	1900	J. W. Franklin	Clear Creek	F. 1914	1
Midas	540	1704	Thor.	2566	1903	Chas. Millard	Clear Creek	S. 1915	1
Goy Rex Jr.	....	2615	Grade	2381	1910	Alfred Eitel	Delhi	S. 1917	3
Napoleon.	....	1048	Grade	1900	1908	Wilbur Sovereen	Delhi	F. 1916	3
Echao 2nd	....	307	Grade	1485	1908	W. J. McCord	King Lake	S. 1916	3
Carenot (imp.)	14657	2327	Clyde.	2946	1908	John Cameron	Langton	F. 1916	1
North Briton (imp.)	9466	108	Clyde.	336	1905	T. H. Collings	Langton	F. 1914	1
Pride of Columbie	....	674	Grade	98	1909	T. H. Collings	Langton	S. 1917	3
Emerald	....	2328	Grade	2999	1908	The Langton Horse Breeding Company,	Langton	F. 1916	3
Wide Awake	....	966	Grade	1833	1901	Hiram Trembley	La Salette	F. 1914	3

* Horse requires inspection.

NORFOLK COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Sir Donald Jr.	....	2320	Grade	3036	1906	D. H. Misner	Lynedoch	F. 1914	3
Cormier Junior	684	1088	Per.	1912	1908	A. M. Collver	Nixon	F. 1916	2
Sir Sam	....	4733	Grade	5137	1914	A. M. Collver	Nixon	F. 1916	3
British Lion	....	660	Grade	1514	1899	Franklin Becker	Port Rowan	S. 1914	3
Magendia Tramp	3731	2447	Per.	725	1898	F. R. Foster	Port Rowan	F. 1914	2
Golden Crown	....	2562	Grade	2215	1898	Robert Davis	Simcoe	S. 1915	3
Hal H.	....	3046	Grade	623	1905	G. E. Everett	Simcoe	F. 1914	3
The Baronet	1026	3116	St. Br.	3596	1909	G. E. Everett & F. S. Chadwick	Simcoe	F. 1916	1
Kairouan (imp.)	3819	2953	Per.	3505	1910	Robt. Hamilton & Son	Simcoe	F. 1916	1
Hassard's Pride (imp.)	8018	1053	Clyde.	988	1905	John Hawthorne	Simcoe	F. 1914	2
Haimon	1600	2616	Ger. Co.	2450	1904	John Law & Wm. Veit	Simcoe	S. 1915	1
General Cord	2017	4521	St. Br.	5005	1909	W. S. McCall	Simcoe	S. 1916	1
Kodi (imp.)	4462	3941	Per.	4170	1910	Milton Porter	Simcoe	F. 1916	1
Metallis King	465	15	St. Br.	1349	1903	K. A. Shaw	Simcoe	S. 1914	1
Hillhurst Sensation	58	3590	Hack.	2917	1895	A. Yeager	Simcoe	S. 1917	1
Julian	6277	4827	Per.	5136	1914	A. Yeager	Simcoe	S. 1917	1
Overton Prince	....	4169	Grade	4075	1912	A. Yeager	Simcoe	F. 1916	3
Jason (imp.)	3818	2937	Per.	3476	1909	Yeager & Hamilton	Simcoe	F. 1916	1
Marshal Haig	18827	4577	Clyde.	5332	1915	J. W. Sanders	Tillsonburg	S. 1917	1
Doc Stanton	....	1211	Grade	2102	1904	Wm. Fredenburg	Walsh	F. 1914	3
Sam	....	2851	Grade	3344	1910	Alex. Terry	Walsingham	S. 1916	3*
Bonniere	3105	4303	Per.	4790	1912	Louis Beemer	Waterford	S. 1916	1*
Cratere (imp.)	1059	2416	Per.	2968	1905	Louis Beemer	Waterford	F. 1914	1
Black Knight	....	4769	Grade	5356	1914	Herbert C. Collver	Waterford	S. 1917	3
Stadacona Edward	11366	870	Clyde.	1642	1909	F. L. Flanders	Waterford	S. 1916	1
Clodion	3648	2189	Per.	1047	1907	J. R. Irwin	Waterford	F. 1914	2
Picador	3343	182	Per.	631	1902	Ezra Mason	Waterford	F. 1912	1
Sir Walter	....	298	Grade	1390	1903	D. W. Smith & Son	Waterford	S. 1915	3

NORTHUMBERLAND COUNTY.

Inverurie Chief (imp.)	11683	1785	Clyde.	2384	1909	John Dillon	Burnley	F. 1916	1
King Edward	1973	428	Per.	786	1905	Jas. Irwin, Jr.	Campbellford (R.R. 2).	F. 1914	1
Surprise	1601	432	Per.	810	1909	Macoun, Locke & Co.	Campbellford	F. 1916	1
Craigie Junior	17080	4358	Clyde.	4833	1914	Alfred Merrell	Campbellford	S. 1916	1*

Star Hal	....	3677	Grade	4225	1900	Fred Peake	Campbellford	F. 1914	3
Willie De	....	945	Grade	1702	1906	Stanley McBride	Centreton	F. 1914	3
Craigie Banner (imp.)	13759	1599	Clyde.	1228	1910	Edward Budd	Cobourg (R.R. 1)	F. 1916	1
King's Purser (imp.)	9905	497	Clyde.	1391	1907	Dr. A. Watson	Cobourg	S. 1916	1
Kinellar Prince (imp.)	13929	1288	Clyde.	1995	1910	George Isaac	Cobourg	F. 1916	1
Laddie Eastfield	12031	818	Clyde.	1887	1909	Matthew Linton	Cobourg	F. 1916	1
Kingship	855	4338	Thor.	4742	1907	Mrs. Lily A. Livingston	Cobourg	S. 1916	1
Stanhope 2nd (imp.)	140	2230	Thor.	1606	1899	Mrs. Lily A. Livingston	Cobourg	S. 1915	1
Lord Chancellor	2658	3165	Clyde.	3428	1896	Joshua McCarthy	Cobourg (R.R. 6)	S. 1914	1
Lord Beachly	983	1786	St. Br.	2383	1904	Robt. F. Massie	Cobourg	S. 1916	1
Prince Wilks	....	3981	Grade	4219	1912	D. R. Hennessy	Codrington	F. 1916	3
Prince George	10936	2042	Clyde.	2820	1909	Andrew Kehoe	Frankford	F. 1916	1
Dunure Dan	16530	4843	Clyde.	5355	1912	Robt. Carstairs	Fenella	S. 1917	1
Jimmie Glen	17426	4844	Clyde.	5406	1913	Robt. Carstairs	Fenella	S. 1917	1
Prince Edward	10860	2852	Clyde.	3047	1909	James Gunter	Frankford (R.R. 1)	S. 1916	1
Jamour (imp.)	3058	3006	Per.	3327	1909	Herbert Parry	Frankford	S. 1916	1
Archie Abbott	....	272	Grade	961	1904	Wilber Winter	Grafton	F. 1912	3
Baron Granite	8520	3134	Clyde.	3490	1907	Jas. McConnell	Hastings (R.R. 2)	F. 1914	1
Ned Fenelon	5683	1718	Per.	5181	1914	Walter Adams	Hilton (R.R. 1)	F. 1916	1
Laddie the 2nd	....	2509	Grade	3216	1910	Geo. Herrington	Hilton	F. 1916	3
J. Leviathan	2682	2961	Per.	3493	1911	W. L. Anderson	Hoards Station	F. 1916	2
Sir Wilfrid	6502	2226	Clyde.	2048	1896	John C. Haig	Hoards Station	S. 1915	1
Young Major	....	1026	Grade	1521	1908	Jas. Nelson Poole	Meyersburg	F. 1916	3
Brilliant Light	976	1695	St. Br.	1708	1904	J. C. Anderson	Morganston	F. 1914	1
Juvenilite (imp.)	3856	2876	Per.	3318	1909	J. C. Anderson	Morganston	S. 1916	1
Nydo	2021	4508	St. Br.	4880	1911	J. C. Anderson	Morganston	S. 1916	1*
Baron's Choice	9357	617	Clyde.	892	1907	Wilfred Carew	Roseneath	F. 1914	1
Baron's Glory	17743	4423	Clyde.	4928	1914	Thos. Carew	Roseneath	S. 1916	1*
Haldimand's Pride	....	3056	Grade	1790	1904	Cecil Radley	Roseneath	F. 1914	3
Nuthurst W.	1573	3613	St. Br.	893	1897	Eldridge Thackeray	Roseneath	F. 1912	1
Peter the Hermit	....	1615	Grade	2214	1905	C. V. Noble Crosby	Trenton	F. 1914	3
Gay Baron	8478	2090	Clyde.	2819	1906	J. T. Parks	Trenton (R.R. 3)	F. 1914	1
Lionel Baron	18188	4628	Clyde.	5077	1914	Lewis B. Stinson	Trenton	S. 1916	1*
Paddy	....	4627	Grade	5073	1906	Lewis B. Stinson	Trenton	S. 1916	3
Artillery	17179	4694	Clyde.	5182	1914	R. G. Way	Trenton	F. 1916	1
Young Rys-Hawk	....	2489	Grade	2624	1903	Wm. Dingman	Warkworth	F. 1914	3
Direct Brook	....	3680	Grade	1224	1909	W. H. German	Warkworth	F. 1916	3
Ben Rupert	....	1866	Grade	223	1907	John M. Casement	Wooler	F. 1914	3
Blacon St. Clair	13354	3772	Clyde.	4211	1911	Burton Ferguson	Wooler (R.R. 1)	F. 1916	1

* Horse requires inspection.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Ben Lomond	18382	4745	Clyde.	5316	1915	Lew Richardson & Sons	Ashburn	S. 1917	1
Celtic Premier	16668	4414	Clyde.	4749	1913	George Grant	Beaverton	S. 1916	1*
Prince Arundle	608	326	St. Br.	196	1903	C. E. Hepburn	Beaverton	F. 1912	1
Silver Mine	11542	1623	Clyde.	2438	1910	Hodgkinson & Tisdale	Beaverton	F. 1916	1
Edward Moir (imp.)	13172	781	Clyde.	1492	1909	Hodgkinson & Tisdale	Beaverton	S. 1917	1
King's Top Knot (imp.)	12685	2543	Clyde.	989	1909	Hodgkinson & Tisdale	Beaverton	F. 1916	1
Lacis (imp.)	3857	3016	Per.	3561	1911	Hodgkinson & Tisdale	Beaverton	S. 1917	1
Malitor (imp.)	3849	3711	Per.	4247	1912	Hodgkinson & Tisdale	Beaverton	F. 1916	1
Miroton (imp.)	4444	3713	Per.	4246	1912	Hodgkinson & Tisdale	Beaverton	F. 1916	1
Celtic Champion	12242	1795	Clyde.	2172	1909	Donald McRae	Beaverton	S. 1917	2
Mack Baron	15959	3096	Clyde.	3651	1911	Donald McRae	Beaverton	S. 1917	1
Kelton	19067	4869	Clyde.	5339	1915	Finley McRae	Beaverton	S. 1917	1
Rock Fullerton	....	4188	Grade	4636	1903	D. McPhail	Blackwater	S. 1915	3
Prince Acme	15573	4516	Clyde.	4999	1913	James Innes	Blackwater	S. 1916	1*
Royal Everett	16351	3754	Clyde.	4248	1912	Patrick Gaughan	Brechin	F. 1916	1
Polignac (imp.)	3556	1161	Per.	1620	1901	Harris Brothers	Brechin	S. 1913	1
Moncrieffe Albion (imp.)	12800	1676	Clyde.	1219	1909	John Vipond	Brooklin	S. 1917	1
King's Courtship (imp.)	14115	1677	Clyde.	1217	1906	Oscar Wilson	Brougham	F. 1914	1
Gold Rod	17213	4991	Clyde.	5481	1915	W. J. Cowan	Cannington	S. 1917	1
Wildbrino Chief	1292	4244	St. Br.	2920	1899	Samuel Ainsworth	Cannington	F. 1914	1
Gipsy Lad	16360	4515	Clyde.	4982	1913	Geo. B. Johnston	Cannington	S. 1916	1*
Baron Elect	1765	2286	St. Br.	1919	1901	John H. Pringle	Cannington	F. 1914	2
Onko	2419	4915	St. Br.	5260	1910	John H. Pringle	Cannington	S. 1917	1
Alert (imp.)	13847	1117	Clyde.	1220	1911	Graham Brothers	Claremont	S. 1917	1
Auchenharvie (imp.)	18266	4801	Clyde.	5376	1914	Graham Brothers	Claremont	S. 1917	1
Baron's Stamp (imp.)	18259	4796	Clyde.	5369	1911	Graham Brothers	Claremont	S. 1917	1
Bonnie Flisk (imp.)	18260	4797	Clyde.	5370	1913	Graham Brothers	Claremont	S. 1917	1
Chief Guardian (imp.)	18267	4798	Clyde.	5371	1914	Graham Brothers	Claremont	S. 1917	1
Colorito (imp.)	333	1114	Hack.	2112	1902	Graham Brothers	Claremont	S. 1913	1
Coniston (imp.)	9560	1339	Clyde.	1614	1906	Graham Brothers	Claremont	F. 1914	1
Gateside Favourite (imp.)	15226	3153	Clyde.	3682	1912	Graham Brothers	Claremont	S. 1917	1
Golden Bar (imp.)	8666	380	Clyde.	552	1906	Graham Brothers	Claremont	S. 1917	1
Mendel Prince (imp.)	18268	4799	Clyde	5373	1915	Graham Brothers	Claremont	S. 1917	1
Reminder (imp.)	18265	4800	Clyde.	5374	1914	Graham Brothers	Claremont	S. 1917	1
Royal Cadet (imp.)	13844	1490	Clyde.	1247	1909	Graham Brothers	Claremont	F. 1916	1
Royal Line (imp.)	11231	1270	Clyde.	2216	1908	Graham Brothers	Claremont	S. 1917	1

Scott's Hero (imp.)	9556	328	Clyde.	213	1905	Graham Brothers	Claremont	F. 1914	1
Spark	....	4626	Grade	5070	1910	Graham Brothers	Claremont	S. 1916	3*
Royal Salute	848	4686	Hack.	5113	1911	E. A. Percy	Claremont (R.R. 2)	F. 1916	1
Belle Boy (imp.)	8524	1290	Clyde.	1988	1905	Nelson Wagg	Claremont	S. 1915	1
Craigie Comet (imp.)	18447	4833	Clyde.	5314	1914	Nelson Wagg	Claremont	S. 1917	1
Baron Arthur	18362	4851	Clyde.	5200	1912	Smith & Richardson	Columbus	F. 1916	1
Baron Orr (imp.)	7769	1586	Clyde.	364	1905	Smith & Richardson	Columbus	F. 1914	1
Baron Crawford (imp.)	9592	758	Clyde.	1407	1908	Smith & Richardson	Columbus	S. 1917	1
Everard (imp.)	16333	4848	Clyde.	4237	1913	Smith & Richardson	Columbus	F. 1916	2
Knight of Maryfield (imp.)	7760	4527	Clyde.	5026	1904	Smith & Richardson	Columbus	S. 1916	1
Royal Design	17286	4849	Clyde.	4967	1914	Smith & Richardson	Columbus	S. 1917	1
Royal Favour	18361	4850	Clyde.	5199	1910	Smith & Richardson	Columbus	F. 1916	1
Dunbarton	....	4994	Grade	5484	1913	K. R. Marshall	Dunbarton	S. 1917	3
King's Heather	14049	4836	Clyde.	5327	1912	D. Ryan	Dunbarton	S. 1917	1
Brogie Lad	12814	744	Clyde.	1213	1909	K. R. Marshall	Dunbarton	S. 1917	1
Aldorf	....	275	Grade	1039	1910	S. H. Pugh	Glen Major	S. 1917	3
Ruby Squire	19250	4973	Clyde.	5464	1915	Joseph Alsop	Goodwood	S. 1917	1
Success	411	2743	Shire	1805	1899	Thos. A. Wilson	Goodwood	S. 1914	1
Edward Darnley (imp.)	9609	216	Clyde.	1200	1904	R. J. Dafoe	Green River	F. 1912	1
City Boy	....	1812	Grade	2463	1900	Wallace Barton	Leaskdale	S. 1915	3
Lord Erskine Cairndale	17038	4394	Clyde.	4858	1914	R. Milne & Sons	Locust Hill (R.R. 1)	S. 1916	1*
Dan Buteman	11986	3609	Clyde.	3053	1909	Wm. G. Cockburn	Manilla	S. 1917	2
Ivory Everlasting	18067	4605	Clyde.	5065	1913	Alfred Carmichael	Myrtle	S. 1916	2*
Royal Ivory Fashion	18068	4692	Clyde.	5122	1915	Alfred Carmichael	Myrtle	F. 1916	1
Baron Elect (imp.)	5629	746	Clyde.	1257	1903	W. H. Pugh	Myrtle Station	F. 1912	1
Terrington Bellman (imp.)	294	745	Hack.	1256	1903	W. H. Pugh	Myrtle Station	F. 1912	1
King Saul (imp.)	9588	2517	Clyde.	3116	1907	Chas. Groat	Oshawa	F. 1914	1
Harry Wilkes	....	4395	Grade	4860	1901	Wm. Harvey	Oshawa	S. 1916	3
Van B.	....	4166	Grade	4559	1912	Wm. Wilson	Oshawa	S. 1917	3
Brown Gallant	17019	4227	Clyde.	4688	1913	J. S. Beare	Pickering (R.R. 2)	F. 1916	2
Lord Regent	1413	3717	St. Br.	4229	1912	Thos. Maddaford	Pickering	F. 1916	1
College Dewey	0119	4855	St. Br.	5273	1914	A. G. Dowson	Port Perry	S. 1917	1
Pomeroy	777	3032	St. Br.	3409	1909	A. G. Dowson	Port Perry	S. 1916	1
Cattaneo (imp.)	12005	1768	Clyde.	2387	1909	W. J. Henders	Port Perry	S. 1916	1
Dunure Ivory	16171	4437	Clyde.	4840	1913	W. J. Henders & Son	Port Perry	S. 1916	2*
Golden Style	14316	4029	Clyde.	4496	1912	W. J. Henders	Port Perry	F. 1916	1
Bright Smile (imp.)	13840	1124	Clyde.	1245	1909	Alonzo Niddery	Port Perry (R.R. 2)	S. 1917	2
Chattan's Buchlyvie	14350	3826	Clyde.	4129	1912	W. C. Platten	Port Perry	F. 1916	1
King Rose Patchen	....	2119	Grade	2732	1910	Patrick Hayes	Rathburn	F. 1916	3
Prince of the Park (imp.)	9687	3480	Clyde.	3503	1907	George Kydd	Sandford	F. 1914	1
Royal Eastfield Lad	8166	2069	Clyde.	2677	1904	Nelson McDonald	Seagrave	S. 1914	1

* Horse requires inspection.

ONTARIO COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner	Address.	Date of Insp.	Form of Cert.
Hillhead Comet (imp.)	14710	1284	Clyde.	2003	1909	J. M. McFarlane	Sonya	F. 1916	2
Craigin of Brookdale	11066	694	Clyde.	907	1909	Alfred Yakley	Stouffville	S. 1917	2
Inventeur (imp.)	2146	2233	Per.	1653	1908	W. R. Ashenhurst	Sunderland	S. 1917	1
Speers	951	1364	St. Br.	936	1903	Hall & Shields	Sunderland	F. 1912	1
Royal Baron 3rd	13780	1455	Clyde.	2207	1910	Geo. R. A. Miller	Sunderland	S. 1916	1*
Baron Smith (imp.)	5313	698	Clyde.	949	1904	John Warren	Udney	F. 1912	1
MacQueen	....	1781	Grade	2322	1904	Edwin A. Christie	Uxbridge	F. 1914	3
Acme's Pride	....	4980	Grade	5470	1914	Claude W. Horne	Uxbridge (R.R. 3)	S. 1917	3
Floriston (imp.)	15258	3112	Clyde.	3663	1911	Alex. McGregor	Uxbridge	F. 1916	1
Simon Grand	....	1563	Grade	2363	1904	Oscar Profit	Uxbridge	S. 1915	3
Bucephalus (imp.)	3338	2698	Clyde.	2570	1899	S. C. Bunker	Whitby	F. 1914	1
Gallant Solway (imp.)	13931	604	Clyde.	440	1910	R. J. Fleming	Whitby	S. 1916	1*
Little Briton (imp.)	704	3356	Hack.	3826	1909	R. J. Fleming	Whitby	S. 1916	1
Glen Dhu Hero	....	3605	Grade	3967	1905	Thos. William Ross	Whitby	S. 1915	1
Baron Lion	14775	4512	Clyde.	4944	1912	Jas. McRae & Son	Whitevale	S. 1916	1*
Gilbert Parker	1034	2270	St. Br.	2171	1903	Jas. Vallentyne	Wilfrid	S. 1913	1
Examiner (imp.)	18262	4802	Clyde.	5375	1914	Henry Thompson	Zephyr	S. 1917	1
High Tide (imp.)	13838	1112	Clyde.	1210	1908	Henry Thompson	Zephyr	S. 1917	1

OXFORD COUNTY.

Wilkes McEwen	....	3483	Grade	3604	1908	Richard Parsons	Beachville	F. 1916	3
Sky Pilot	855	2513	St. Br.	1105	1900	R. J. Chamberlain	Bright	F. 1914	1
Prince Robert	12755	4962	Clyde	1480	1911	George Smith	Brooksdale	S. 1917	2
Pat. L. McGregor	957	1904	St. Br.	2448	1901	F. N. Case	Burgessville	S. 1915	1
King of the Saxons (imp.)	13760	711	Clyde	1265	1910	W. B. Parker	Cassel	F. 1916	1
Longtemps (imp.)	4466	3990	Per.	4085	1911	W. B. Parker	Cassel	F. 1916	1
Horatio (imp.)	8111	1100	Clyde	1623	1905	Kyle Brothers	Drumbo	F. 1914	1
Canadian Boy	....	4344	Grade	4766	1911	Harry Bell	Eastwood	S. 1916	3*
Gallant Godolphin	13794	333	Clyde	231	1909	Wm. M. McCorquodale	Embro (R.R. 3)	F. 1916	1
Mucius (imp.)	13896	352	Clyde	334	1903	Henry E. Schaefer	Embro	F. 1912	1
Gregory Dare	1645	4369	St. Br.	4915	1913	John H. McKay	Harrington	S. 1916	1*
Baron's Chief	12871	4147	Clyde	4548	1911	David A. Adam	Ingersoll	S. 1917	1
Macmicking Jr.	....	983	Grade	1893	1904	Alonzo Johnson	Ingersoll	S. 1915	3

Young Clan Bain	....	1219	Grade	2014	1897	John A. Fallowfield, Ingersoll	S. 1915	3
Nogent	4458	4561	Per.	4994	1913	G. D. Hutchison, Ingersoll (R.R. 3)	S. 1916	1*
Pride of Brock	1278	4873	Shire	5334	1912	Richard Archer, Ingersoll	S. 1917	2
Dan Cummings	14550	4566	Clyde	4872	1912	W. J. Nancekivell, Ingersoll	S. 1916	1*
Crown Dick	16947	4448	Clyde	4823	1914	Geo. Chesney, Innerkip	S. 1916	1*
Roberts	....	1849	Grade	1863	1907	John A. McKenzie, Innerkip (R.R. 2)	S. 1916	3
Favourite Blend	13427	2468	Clyde	1114	1910	John Zinn, Innerkip	F. 1916	1
Oxford's Pride	14818	1467	Clyde	2270	1909	Andrew Farrell, Norwich	F. 1916	1
Goy Rex	....	229	Grade	164	1897	Horace H. Palmer, Norwich	F. 1912	3
King George	....	1204	Grade	162	1906	W. L. Palmer, Norwich	F. 1914	3
Duke of Ardlethan	17159	4453	Clyde	4789	1914	Wm. M. Fletcher, Ostrander	S. 1916	1*
Abdell	1290	2834	St. Br.	1871	1901	M. E. Adair, Otterville	S. 1915	1
Baron Gilchrist	12921	3966	Clyde	4395	1911	William Holmes, Otterville	F. 1916	1
Golden Powis	12922	3945	Clyde	4066	1911	William Holmes, Otterville	F. 1916	1
Bohrangus 2nd	9541	323	Clyde	163	1909	H. C. Treffry, Otterville (R.R. 2)	F. 1916	1
Golden Lad	17001	4234	Clyde	4676	1912	Andrew S. Fleming, Springford	F. 1916	1
Johnson's Victor	11548	3149	Clyde	3668	1909	J. R. Johnson, Springford	S. 1916	1
Wickbrino	1697	3585	St. Br.	3017	1904	J. R. Johnson, Springford	F. 1914	1
Athol King (imp.)	9178	140	Clyde	713	1907	P. Herold, Tavistock	S. 1916	1
Crown King	18915	4755	Clyde	5126	1914	Geo. Wettlaufer, Tavistock (R.R. 1)	F. 1916	1
King Sherman	....	2117	Grade	2433	1905	Wm. & Henry Lingelbach, Tavistock	F. 1914	3
Duke of Connaught	....	3477	Grade	3377	1911	A. B. Abell, Tavistock	F. 1916	3
Coronado (imp.)	254	537	Hack.	1100	1900	Wm. & Henry Lingelbach, Tavistock	F. 1912	1
Henry C. Smith	1383	3290	St. Br.	3770	1899	F. W. McKay, Tavistock	F. 1914	1
Jew	....	4530	Grade	4979	1909	Daniel Ruby, Tavistock	S. 1916	3
Lassis (imp.)	3920	4309	Per.	4777	1911	Ratz & Herold, Tavistock	S. 1916	1*
Sentinel Wood	....	4310	Grade	4778	1908	Ratz & Herold, Tavistock	S. 1916	3
Wilksmore	....	2673	Grade	2990	1904	Adam Mansz, Tavistock	S. 1915	3
Black Prince	4832	4914	Per.	5151	1914	R. & W. B. McFarlan, Thamesford	F. 1916	1
Denholmhill David	18713	4990	Clyde	5479	1915	W. W. Hogg, Thamesford	S. 1917	1
Oscar	751	3748	Hack.	4009	1913	W. W. Hogg, Thamesford	F. 1916	1
Petty Stamp (imp.)	13150	662	Clyde	1570	1910	Walter Armstrong, Thamesford	F. 1916	1
Rupin (imp.)	1061	577	Per.	230	1906	The Percheron Horse Co., Thamesford	S. 1917	2
Black Joe	....	3526	Grade	3933	1910	Thos. Early, Tillsonburg	F. 1916	3
Dandy Prince	9533	811	Clyde	1858	1908	William Harris, Tillsonburg	F. 1916	1
Royal Milton	13482	1937	Clyde	165	1909	William Harris, Tillsonburg	F. 1916	1
Papillon (imp.)	1062	2885	Per.	724	1905	R. B. Moulton, Tillsonburg	S. 1914	1
Wildbrino King	79	3918	St. Br.	4046	1903	R. B. Moulton, Tillsonburg	F. 1914	1
Excello	13161	218	Clyde	1493	1908	Jas. E. Otterson, Tillsonburg	F. 1916	1
Dr. John Junior	....	4699	Grade	1044	1909	S. D. Cline, Waterford (R.R. 2)	F. 1916	3

* Horse requires inspection.

OXFORD COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Romadore	3512	3659	Per.	4036	1912	Thos. Downey	Woodstock	F. 1916	1
Ordna Wilkes	....	3856	Grade	4405	1902	Benjamin Hobson	Woodstock	S. 1915	3
Craigie Buchlyvie	12615	3294	Clyde	451	1909	S. W. Jackson	Woodstock	S. 1916	1
Lodi (imp.)	4015	3211	Per.	3718	1911	G. H. Raper	Woodstock (R.R. 7)	F. 1916	1

PEEL COUNTY.

Alna Peter	1876	4866	St. Br.	5433	1915	Geo. A. Cameron	Alton	S. 1917	1
Lord Roberts	3870	1647	Clyde	2432	1897	Wm. Harkies	Alton	F. 1914	1
Lumley's Best	1003	2421	Shire	2898	1910	R. B. Coulter	Alton	S. 1917	1
Royal Stamp	14381	2481	Clyde	3173	1910	Robt. A. Stubbs	Alton	S. 1916	1*
Stately City Boy	14477	1893	Clyde	2640	1910	Jas Morrison	Alton	S. 1917	1
Baron Gregor (imp.)	14051	1611	Clyde	2481	1910	Goodfellow Bros.	Bolton	F. 1916	1
Baron's Hope (imp.)	14052	1613	Clyde	2482	1910	Goodfellow Bros.	Bolton	F. 1916	1
Colonel Lumsden	16903	4752	Clyde	5188	1914	Goodfellow Bros.	Bolton	F. 1916	1
Diadem (imp.)	9921	1435	Clyde	2135	1904	Goodfellow Bros.	Bolton	F. 1914	1
Isomar (imp.)	14053	1612	Clyde	2483	1910	Goodfellow Bros.	Bolton	F. 1916	1
Kircudbright Baron (imp.)	14055	1597	Clyde	2480	1910	Goodfellow Bros	Bolton	F. 1916	1
Eastwood Todd	2034	4633	St. Br.	5045	1907	T. D. Elliott	Bolton	S. 1916	1
High Honor (imp.)	15178	3154	Clyde	3683	1908	T. D. Elliott	Bolton	F. 1916	1
Irade (imp.)	1641	1090	Per.	146	1908	T. D. Elliott	Bolton	S. 1916	1
Leicester (imp.)	3921	3448	Per.	3816	1911	T. D. Elliott	Bolton	F. 1916	1
Royal Victory (imp.)	15221	3240	Clyde	3703	1908	T. D. Elliott	Bolton	F. 1916	1
Sandy MacNab	14272	2980	Clyde	3526	1912	Robt. H. Thomas	Bolton	F. 1916	1
Gachil (imp.)	2276	2863	Per.	505	1906	John Andrews	Brampton	F. 1914	1
Ictere (imp.)	1610	776	Per.	1512	1908	E. Chapman	Brampton	F. 1916	1
Jet (imp.)	2138	1516	Per.	2495	1909	Waldie Steen	Brampton	F. 1916	1
Lovely Baron (imp.)	8452	1606	Clyde	2494	1907	Waldie Steen	Brampton	F. 1914	1
Mr. Gamey	....	1722	Grade	2496	1903	Waldie Steen	Brampton	F. 1914	3
Prince Hohenlohe	127	860	Thor.	1656	1904	Jas. Bovaird	Brampton	S. 1915	1
Rosturtium	512	4304	Thor.	4812	1910	Jas. Bovaird	Brampton	S. 1916	1*
Sordello (imp.)	13292	1128	Clyde	488	1909	Nix & Nixon	Brampton	F. 1916	1
Spartan (imp.)	509	1127	Hack.	1263	1905	Jas. Tilt	Brampton	F. 1914	1
Baron Again	12836	2508	Clyde	3170	1911	W. J. Trathen	Caledon	F. 1916	1

Lumley Boy	1002	2425	Shire	3089	1909	Jas. Petch	Caledon (R.R. 2)	F. 1916	1
Oro Leonard	949	1426	St. Br.	1821	1909	John Carr	Caledon East	F. 1916	1
Napoleon Bonaparte	....	640	Grade	460	1903	W. A. Dowling	Caledon East (R.R. 2)	F. 1912	3
Pride of Albion (imp.)	14056	3014	Clyde	3554	1911	Ronald Crawford	Caledon East	F. 1916	1
Gartly Favourite	15284	3708	Clyde	3978	1911	Wm. G. Bailey	Campbell's Cross	F. 1916	1
Baron's Eclipse	15654	3204	Clyde	3724	1911	Chas. Doherty	Castlemore	S. 1917	1
Erindale Posey	1648	2619	St. Br.	2503	1908	Jos. Wolfe	Cooksville	F. 1916	1
Dan MacNab	14354	2995	Clyde	3527	1912	Robt. Clarkson	Inglewood	F. 1916	1
Thom's Pride (imp.)	12642	1326	Clyde	1861	1909	Jas. Graham	Inglewood (R.R. 1)	F. 1916	1
Humber King	1004	3600	Shire	3762	1911	C. S. Gardhouse & Sons	Malton	S. 1917	1
Isole (imp.)	2271	900	Per.	1594	1908	A. E. Wedgewood	Malton	F. 1916	1
Client (imp.)	18363	4753	Clyde	5197	1914	Nelson Hewson	Mono Road	F. 1916	1
Emulator (imp.)	4502	2047	Clyde	1881	1903	Little Brothers	Mono Road	F. 1914	1
Sir Gilbert 2nd	14505	2048	Clyde	1882	1910	Little Brothers	Mono Road	F. 1916	1
Dan MacNab	12950	2926	Clyde	3497	1911	Robert Boyce	Palgrave	F. 1916	1
Gay Scott (imp.)	14577	1145	Clyde	2088	1908	David Matson	Palgrave	F. 1916	1
Baron Hamlet (imp.)	6090	372	Clyde	507	1904	Patterson Bros.	Summerville	F. 1912	1
Gay Ronald	15342	4218	Clyde	4368	1913	James Patterson	Summerville	F. 1916	1
Golden Crown	....	2708	Grade	87	1903	Henry W. Cook	Streetsville	F. 1912	3
Charley Baron	....	4168	Grade	4675	1912	John Stokes	Terra Cotta	F. 1916	3

PERTH COUNTY.

Mount Brino	....	3195	Grade	3706	1898	R. T. Carson	Atwood	F. 1914	3
Tom Nabat	208	2482	Thor.	3176	1905	Wm. Galbraith	Atwood	F. 1914	1
Knockinlaw Revolt (imp.)	15482	2958	Clyde	3489	1911	John Gray	Atwood	F. 1916	1
Baron Black (imp.)	4788	2242	Clyde	2737	1902	Mary Wesenberg	Brodhagen	S. 1915	1
Voltaire	3558	1646	Per.	521	1902	John Chambers	Cromarty	F. 1912	2
Cumberland Scott (imp.)	13979	2892	Clyde	3183	1911	Robt. Burchill	Dublin (R.R. 2)	S. 1916	1*
Punch of Glamis	17888	4806	Clyde	5118	1914	J. C. Dill	Gadshill	S. 1917	1
Dunure Lucky Star	15379	3335	Clyde	3740	1911	Bender & Walter	Gowanstown	F. 1916	1
Integrity (imp.)	11864	2218	Clyde	2949	1909	B. Bender	Gowanstown	F. 1916	1
Prince of Brougham (imp.)	16339	3871	Clyde	4255	1911	D. W. & J. E. Walters & J. Snider	Gowanstown	F. 1916	1
Mercedes Yet	12257	1668	Clyde	2501	1907	George Duffield	Granton	S. 1915	2
Hesope (imp.)	1592	3568	Per.	614	1907	John McKeaver	Listowel	S. 1915	1
Royal Dale (imp.)	14136	1470	Clyde	2352	1910	John Collins	Listowel	F. 1916	1
Mitre Bearer	709	2483	St. Br.	3175	1904	John A. McIntyre	Listowel	F. 1914	1

* Horse requires inspection.

PERTH COUNTY —*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Bourbon Purcell	....	3486	Grade	3914	1904	M. H. Bundscho	Milverton	F. 1914	3
Widower Peter	....	3340	Grade	3809	1910	W. H. Grosch	Milverton	F. 1916	3
Kontrepoids (imp.)	3504	3906	Per.	4444	1910	Stephen C. McLellan	Milverton	S. 1917	2
Royal Ronald	12086	1368	Clyde	2334	1907	Jas. E. Brooks	Mitchell	F. 1914	1
Lord Roberts	....	3427	Grade	3882	1898	Samuel Collins	Mitchell	S. 1915	3
King Norman (imp.)	17898	4480	Clyde	4918	1909	Hugh Colquhoun	Mitchell	S. 1916	1
Free Mason (imp.)	7847	841	Clyde	1727	1905	Wm. Colquhoun	Mitchell	F. 1914	1
Riverbank (imp.)	17954	4570	Clyde	5034	1911	Wm. Colquhoun	Mitchell	S. 1916	1*
Scottish Mains (imp.)	11587	2077	Clyde	2757	1908	Frederick Eisler	Mitchell	S. 1916	1
Craigie Baronet (imp.)	17599	4392	Clyde	4846	1912	Moses Forsyth	Mitchell	S. 1916	1*
Dothan	60432	3773	St. Br.	4069	1912	Harvey Hannon	Mitchell	F. 1916	1
Official	1751	4616	St. Br.	5061	1900	Henry James	Mitchell	S. 1916	1
Sololand	2302	4918	St. Br.	5428	1911	A. E. Larkworthy	Mitchell	S. 1917	1
King Kay	13029	529	Clyde	400	1909	John Murray	Mitchell	F. 1916	1
Lord Hiawatha	14433	3770	Clyde	4071	1912	John Murray	Mitchell	F. 1916	1
Faraway Blend (imp.)	9006	1098	Clyde	1650	1904	John E. Stacey	Mitchell (R.R. 4)	F. 1914	1
Bresilien	....	2190	Grade	2825	1901	Geo. Wolfe	Mitchell	S. 1914	3
Prince of Palmerston	14925	2549	Clyde	3234	1910	Asel Ackerman	Palmerston	F. 1916	1
Gold Coin	....	3879	Grade	4450	1912	John C. Patterson	New Hamburg (R.R. 3)	S. 1917	3
Hazelwood	820	4701	Hack.	5135	1914	John Knechtel	Rostock	F. 1916	1
Captain Murray	11746	2503	Clyde	3191	1908	Theodore Riehl	Rostock	S. 1916	1
Involucre (imp.)	....	354	Grade	350	1908	George Burnside	St. Mary's	S. 1917	3
Broomdale (imp.)	12150	2401	Clyde	2552	1904	John Fitzsimons	St. Mary's	F. 1914	1
Steel Trust	1018	2402	St. Br.	2553	1902	John W. Wood (John Fitzsimons, Mgr., St. Mary's)	Lethbridge, Alta.	F. 1914	1
Gartly Forever (imp.)	8412	490	Clyde	1197	1906	W. L. Mossip	St. Mary's	S. 1915	1
Teddy Bars	1464	3507	St. Br.	3744	1905	W. L. Mossip	St. Mary's	F. 1914	1
Pacific (imp.)	13173	565	Clyde	277	1904	W. L. Mossip	St. Mary's	F. 1912	1
Sir Randolph (imp.)	9547	473	Clyde	1084	1902	W. L. Mossip	St. Mary's	F. 1912	1
Quicksilver (imp.)	15177	4088	Clyde	4358	1907	James Muir	St. Mary's	S. 1915	1
Baron's Luck	5546	2711	Clyde	3209	1904	Wm. Rae, Jr.	St. Mary's (R.R. 7)	F. 1914	1
Major Muir (imp.)	12559	2714	Clyde	1363	1909	Wm. Rae, Jr.	St. Mary's	S. 1917	1
Linfield Oro	....	2580	Grade	3166	1910	P. S. Riddell	St. Mary's	F. 1916	3
Duke of Avon Brae	13919	1977	Clyde	2740	1910	Alex. Thompson	St. Mary's (R.R. 5)	F. 1916	1
Sir Edmund (imp.)	9372	1524	Clyde	2066	1899	D. F. Thomson	St. Mary's	F. 1914	2
Sam Slick	....	4520	Grade	5004	1912	Denis Clifford	St. Paul's	S. 1916	3*

Caton (imp).	1064	1089	Per.	351	1905	Charles Keast	Science Hill	F. 1914	1
Conquering Baron (imp.)	10778	2365	Clyde	2653	1904	Wm. J. Malloy	Sebringville	F. 1914	1
Ken Favourite (imp.)	16472	3916	Clyde	4361	1911	H. Reidt	Shakespeare	F. 1916	1
Springfield 2nd	555	3310	Thor.	3297	1903	H. Reidt	Shakespeare	S. 1915	1
Lord Malcolm (imp.)	15194	3125	Clyde	3665	1912	Thos. Colquhoun	Staffa	F. 1916	1
Makwira (imp.)	15279	3267	Clyde	3754	1908	John Livingstone	Staffa	S. 1916	1
Albert McKinney	1730	3817	St. Br.	4504	1912	J. P. Aitcheson	Stratford	S. 1917	1
Locksley (imp.)	15239	3146	Clyde	3612	1911	Austin Dingman	Stratford	F. 1916	1
Bryson McKinney	1745	3647	St. Br.	3790	1911	Chas. Finnegan	Stratford	F. 1916	1
Macduff	13461	3537	Clyde	3940	1911	Jas. McGillawee	Stratford (R.R. 1)	F. 1916	1
Alladin (imp.)	13975	2426	Clyde	2683	1911	Henry Metz	Stratford	S. 1917	1
Prince of St. Paul's	10520	2427	Clyde	2674	1908	Henry Metz	Stratford	S. 1915	1
Toddy Direct	215	480	St. Br.	737	1906	Jos. W. Pinkney	Stratford	F. 1914	1
Prince Victor (imp.)	5785	1620	Clyde	1771	1902	Fred Riehl	Stratford (R.R. 5)	F. 1914	1
Warren B.	....	4617	Grade	5074	1911	F. Richardson	Stratford	S. 1916	3*
Prince of Armadale (imp.)	9919	541	Clyde	1542	1907	Bannerman Brothers	West Monkton	F. 1914	1
Atwood Boy	14441	3818	Clyde	4347	1912	Z. E. Gill	West Monkton	F. 1916	1
Baron Galloway (imp.)	8482	1753	Clyde	2017	1904	Henry Brothers	West Monkton	F. 1914	1

PETERBORO COUNTY.

Charming Rod	14635	3205	Clyde	3726	1912	Fred Anderson	Ballieboro	S. 1917	2
Gordon Montrave II	....	3162	Grade	3677	1908	Wm. E. Boulton	Burleigh Falls	F. 1916	3
Craigie MacQueen	17200	4647	Clyde	5072	1914	Fred Chase	Chase's Corners	S. 1916	1*
Joe Pointer Jr.	....	3463	Grade	3907	1912	John R. Weese	Cordova Mines	F. 1916	3
Capulet (imp.)	12619	2329	Clyde	2634	1909	Richard Walsh	Hastings	F. 1916	1
Dunure Shapely (imp.)	9597	3254	Clyde	3707	1907	Richard Walsh	Hastings	S. 1915	1
Jamlon (imp.)	2333	2330	Per.	2635	1909	Richard Walsh	Hastings	F. 1916	1
Jim Shell	257	2631	St. Br.	2636	1911	Richard Walsh	Hastings	F. 1916	1
Liard (imp.)	3759	3065	Per.	3627	1911	Richard Walsh	Hastings	F. 1916	1
Inaltero 2nd	....	4639	Grade	5080	1914	Fred G. Varty	Havelock	S. 1916	3*
Lord Lionel 2nd	5400	546	Clyde	811	1904	C. L. Coon	Havelock	F. 1912	1
Lucky Lou	....	4282	Grade	4218	1909	S. R. McQuigge	Havelock	F. 1916	3
Sir Ridgnald 2nd	....	4637	Grade	5071	1908	W. J. Doughty	Havelock	S. 1916	3
Sir Wilfred's Fancy	9465	1416	Clyde	2306	1907	David Vansickle	Havelock	F. 1914	1
Cairngaan's Pride	16136	4846	Clyde	5184	1913	Wm. H. Elmhirst	Indian River	F. 1916	1
Drumberg Chieftain (imp.)	12622	324	Clyde	180	1909	John Lonergan	Indian River	F. 1916	1
Inaltero (imp.)	2144	151	Per.	774	1908	Thos. J. McConnell	Indian River (R.R. 2)	F. 1916	1

* Horse requires inspection.

PETERBORO COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Prince of Wales of Manchester .	4620	1698	Clyde	179	1902	Alex. Nesbitt & Son	Indian River	F. 1912	2
Rex Red Bird	....	4719	Grade	5183	1914	Harry Brown	Indian River	F. 1916	3
Rex Correnette	....	3028	Grade	3560	1910	Wm. H. Elmhirst	Indian River	F. 1916	3
Standard Model	17726	4362	Clyde	180	1909	John Lonergan	Indian River	S. 1916	1*
Black Diamond	....	3320	Grade	3709	1902	John Condon	Lakefield	F. 1914	3
City Pointer	....	3682	Grade	4217	1911	Fife Brothers	Lang	F. 1916	3
Oro Tariff	....	1223	Grade	1990	1906	Fife Brothers	Lang	F. 1914	3
Sir Ben (imp.)	5408	2152	Clyde	2859	1901	J. Elmhirst & W. Renwick..	Lang	F. 1914	1
Baron MacQueen	6624	1907	Clyde	2309	1905	Wellington Burgess	Norwood	S. 1915	1
McEwan's Pride	11622	3349	Clyde	3818	1910	John M. Ferguson	Norwood	F. 1916	1
Young Picture Fashion	....	3439	Grade	3559	1907	John Newall	Norwood	S. 1915	3
Baron Murray (imp.)	13821	1489	Clyde	1146	1910	W. J. Cox ....183 Lock St.,	Peterboro	S. 1917	1
Fernhall	2315	3900	St. Br. ...	4410	1909	F. L. Robinson	Peterboro	S. 1917	2
Gartly Challenger (imp.)	5405	1424	Clyde	1749	1902	Lewis & Clarence Ferguson..	Peterboro (R.R. 2) ..	S. 1915	1
Baron's Fortune	11657	2058	Clyde	2289	1910	W. J. Grant	Peterboro (R.R. 1) ...	F. 1916	1
Gartly Morgan	17860	4859	Clyde	5393	1912	Frank Montgomery	Peterboro	S. 1917	1
Geulin (imp.)	932	3177	Per.	250	1906	Jas. Collins	Peterboro	S. 1915	1
Helsington Glory (imp.)	11465	469	Clyde	1042	1906	Allen B. Mann	Peterboro	F. 1914	1
Jimmy Direct	....	4154	Grade	4621	1907	F. Montgomery	Peterboro	S. 1915	3
Journalier (imp.)	2330	331	Per.	219	1909	Frank H. Burke	Peterboro	S. 1917	1
Lord Erskine	....	946	Grade	1707	1910	Bowles Brothers	Peterboro (R.R. 5) ...	F. 1916	3
Lorin 2nd	4347	4354	Per.	4825	1913	W. A. Roseborough	Peterboro	S. 1916	1*
Macnair	....	3794	Grade	4351	1905	Michael Sullivan	Peterboro	S. 1915	3
Marquis	3640	2552	Per.	3185	1910	James Killen	Peterboro (R.R. 1) ...	F. 1916	1
Napoleon Bonaparte (imp.) ...	380	2988	Thor.	3477	1909	J. E. Colson, The Oriental Hotel,	Peterboro	F. 1916	1
Paddy B.	1958	1430	Per.	2028	1901	P. W. & J. Brown	Peterboro	F. 1914	1
Paturot (imp.)	1972	1818	Per.	2512	1904	P. W. & J. Brown, 599 Homewood Ave.,	Peterboro ...	F. 1914	1
Scotland's Knight	13940	3691	Clyde	4077	1912	Richard Doris	Peterboro (R.R. 6) ...	F. 1916	1
Surname (imp.)	13804	1356	Clyde	941	1909	R. H. Nesbitt	Peterboro	S. 1917	2
Village Swain (imp.)	15167	2883	Clyde	3446	1912	J. Wason & Clayton Hanbidge	Peterboro	S. 1917	1
Meaburn King (imp.)	8806	4132	Clyde	2449	1905	Verner English	Silver Lake	F. 1914	1
Prince Roy	....	2523	Grade	3179	1905	Meldrum Graham	Silver Lake	S. 1914	3
Royal Bain	....	4349	Grade	4796	1906	John Delaney	Warsaw	S. 1916	3

PRESCOTT COUNTY.

Dominion Day	....	4878	Grade	5282	1914	Victor Quesnel	Alfred	S. 1917	3
Fred	....	4425	Grade	4779	1913	Daoust & Belanger	Alfred	S. 1916	3*
Territorial (imp.)	401	1994	Per.	496	1904	Saniel & Chevrier	Alfred	F. 1912	1
The Sensation (imp.)	11681	706	Clyde	1080	1908	David A. Seguin	Alfred	F. 1916	1
Rigilo	2670	471	Per.	1079	1909	Albert Wilkes	Fournier	F. 1916	1
Barney	....	4691	Grade	5117	1914	Robt. A. Hanna	Hawkesbury (R.R. 2)	F. 1916	3
Briton	....	1671	Grade	2597	1910	Jas. Spratt	Hawkesbury	F. 1916	3
Hawkesbury Joe	....	4184	Grade	4671	1909	Jules Deforce	Hawkesbury	F. 1916	3
Union Parole	....	4854	Grade	5216	1905	A. Chevrier	Hawkesbury	F. 1916	3
Good Quality (imp.)	6934	3259	Clyde	1527	1901	Orphis Lalonde	Lefaivre	S. 1914	1
Meadowbank Billy	....	3156	Grade	3441	1905	Onesime Menard	Lefaivre	S. 1914	3
Brigand	739	2516	Fr. Co.	2402	1902	James A. Harrigan	Lemieux	S. 1913	1
Prairy Dock	....	981	Grade	1883	1910	John C. Brownell	Lemieux	F. 1916	3
Valjean	150	2154	Thor.	2876	1906	Can. Nat. Bureau of Breeding (R. C. Chisholm, Agt., Vankleek Hill.)	Montreal	S. 1915	1
John Lucifer	....	4963	Grade	5436	1910	A. B. Campbell	Plantagenet	S. 1917	3
Bill Sensation	....	4539	Grade	5009	1912	J. S. Lalonde	Plantagenet Springs	S. 1916	3*
Mikado (imp.)	12926	1322	Clyde	1866	1908	G. A. Ryan	Riceville	S. 1915	1
Canadian Beauty	....	270	Grade	934	1905	O. St. Amour & J. McCuaig	St. Amour	F. 1914	3
Dick	....	2476	Grade	3181	1906	Ovila Campeau	St. Amour	F. 1914	3
Billy	....	167	Grade	1302	1904	Pierre Vachon	Ste. Anne de Prescott	F. 1914	3
Blaiket Blend	15197	3093	Clyde	3631	1910	Pierre Vachon	Ste. Anne De Prescott	F. 1916	1
Cesar (imp.)	3710	2332	Per.	1327	1904	Victor Belaire	Ste. Anne De Prescott	F. 1914	1
Royal Prince of Canada	11546	1314	Clyde	1915	1910	Samuel Burwash	St. Eugene	S. 1916	1*
Joliet General	1016	4065	Shire	4580	1911	John A. McCuaig	Vankleek Hill	F. 1916	2
Lord Allan	4497	2399	Clyde	3112	1904	John D. McCallum	Vankleek Hill	F. 1914	1
Paddy	....	3967	Grade	4349	1910	Adam Murray	Vankleek Hill	F. 1916	3
Robert Erskine (imp.)	16183	3462	Clyde	3906	1911	Joseph St. Denis	Vankleek Hill	F. 1916	1

PRINCE EDWARD COUNTY.

Don Pedro	....	285	Grade	1333	1909	Sylvester Pine	Allisonville	S. 1917	3
Golden Prince	....	249	Grade	578	1906	Washington Pine	Allisonville	F. 1914	3
Highlander Chief	15758	4578	Clyde.	4989	1913	M. E. Wood	Ameliasburg	S. 1916	1*
Acme Yet	10381	554	Clyde.	565	1910	Geo. W. Anderson	Belleville	S. 1917	1

* Horse requires inspection.

PRINCE EDWARD COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Blacon's Fortune	14655	4892	Clyde.	5185	1912	D. Burlingam	Bloomfield	F. 1916	1
Glenco	5535	4754	Per.	5204	1914	M. Grant Thompson	Bloomfield	F. 1916	1
Jouan (imp.)	2139	653	Per.	780	1909	Grant Thompson	Bloomfield	F. 1916	1
George Wallace	....	4780	Grade	5252	1915	Fred S. Weeks	Consecon	S. 1917	3
Jasper	4306	4277	Per.	4714	1913	Richard Bedford & A. S. Burr	Consecon	F. 1916	1
Tomich's Heir (imp.)	6792	827	Clyde.	1913	1905	Horace Alyea	Consecon	S. 1913	1
Lord Malcolm	9768	98	Clyde.	803	1909	Sheldon Y. Benson	Elmbrook	S. 1917	2
Archie K. Pointer	0102	3785	St. Br.	4292	1904	C. W. Cole	Milford (R.R. 3)	S. 1915	1
Domino (imp.)	1065	99	Per.	812	1905	G. Edward Boulter	Picton	F. 1914	1
Herculoid	3108	3722	Per.	4222	1912	G. Edward Boulter	Picton	F. 1916	1
Kroupier (imp.)	3037	431	Per.	805	1910	G. Edward Boulter	Picton	F. 1916	1
Richorn Prince (imp.)	11791	2813	Clyde.	3348	1908	G. Edward Boulter	Picton	F. 1916	1
Canada's Pride Jr.	....	247	Grade	571	1907	E. Pecling & Reuben Hill	Picton	S. 1915	3
Catalan	....	2540	Grade	1796	1902	Terry O'Neil	Picton	F. 1914	3
Grand Opera	....	1987	Grade	391	1905	James Hudgins	Picton	S. 1915	3
Roylstreat Vidocque	....	133	Grade	568	1907	Thos. Clapp	Picton	F. 1914	3
Won't Dance	1668	3796	St. Br.	4355	1909	Healy & Herrington	Picton	F. 1916	1
Young Montcalm	....	132	Grade	570	1905	John McCaw	Picton	S. 1915	3
President De Lion	811	635	St. Br.	573	1901	Jas. W. Brickman	Rednersville	F. 1912	2
Blitz Jr.	....	590	Grade	414	1900	R. C. Hubbs	Rossmore	F. 1912	3
Dukedom	3041	3848	Per.	4064	1912	W. E. Anderson	Rossmore	F. 1916	1
Prince Edward	4493	4693	Per.	5180	1914	W. E. Anderson	Rossmore	F. 1916	1
Scotland Clyde	16158	4690	Clyde.	5110	1914	M. Roy Anderson	Rossmore	F. 1916	1
Koursier (imp.)	4007	4511	Per.	3988	1910	J. H. Davidson	Wellington	F. 1916	1

RENFREW COUNTY.

Ocean Du Blocus (imp.)	657	4609	Bel. Dr.	4901	1911	Allen Cardiff	Admaston	S. 1916	1*
Leduc	....	4313	Grade	4900	1900	John Beatty	Admaston Station	S. 1916	3
Grand Opera	2388	4825	St. Br.	1206	1908	John Brennan	Arnprior	F. 1916	1
Gauddette	....	4728	Grade	5210	1914	Duncan Cameron	Arnprior	F. 1916	3
Roy	....	3428	Grade	3884	1910	Timothy Carron	Arnprior	F. 1916	3
Captain Larabie	....	3636	Grade	3737	1904	J. H. Moorhouse	Arnprior, Box 585	F. 1914	3

Jack the Hermit 2nd	....	1499	Grade	344	1904	J. G. Nesbitt	Arnprior	F. 1912	3
Killarney (imp.)	3354	39	Clyde.	21	1900	George Parker	Arnprior	F. 1912	1
Liberty Mograzie	78	3201	St. Br.	2253	1910	Andrew Russell	Arnprior	F. 1916	2
Ashland J.	161	1074	St. Br.	342	1901	W. G. Tompkins	Arnprior	F. 1914	1
Rutabaga Junior	....	2362	Grade	3085	1907	Michael Conway	Barry's Bay	F. 1914	3
Prince Hall	....	3470	Grade	3893	1910	A. E. White	Barry's Bay	F. 1916	3
Hedon Fashion (imp.)	624	4586	Hack.	2682	1904	Geo. S. Bennett	Beachburg	S. 1916	1
Impulsif (imp.)	2265	1093	Per.	188	1908	A. W. Cameron	Beachburg	F. 1916	1
Sulphur Spring	11406	510	Clyde.	1435	1910	A. W. Cameron	Beachburg	S. 1916	1*
Sandy Macaron	....	2952	Grade	3502	1909	Wm. Fletcher	Beachburg	F. 1916	3
Hedley's Choice	13052	3947	Clyde.	4315	1911	Alex. Hawthorne	Beachburg	F. 1916	1
Royal Loma	15291	3666	Clyde.	4126	1912	John McClelland	Beachburg (R.R. 2)	F. 1916	1
Golden Thistle	10253	19	Clyde.	1341	1909	Albert Watchorn	Beachburg	F. 1916	1
Baron Helsington	17374	4934	Clyde.	5466	1915	Jas. Stewart	Braeside (R.R. 1)	S. 1917	1
The Baron Kuroki	2032	4212	St. Br.	4682	1907	Edward Freeland	Cobden	S. 1915	1
Black Prince	....	3676	Grade	4189	1911	R. A. McDiarmid	Cobden	F. 1916	3
Hudson (imp.)	1556	668	Per.	46	1907	Patrick Culligan	Douglas	S. 1915	1
Lord Dunmore	1959	1404	Per.	47	1908	Chas. Virgin	Douglas (R.R. 1)	F. 1916	1
Roscoe	....	1609	Grade	2603	1902	Wm. Hein	Eganville	S. 1911	3
Jasper (imp.)	2327	3620	Per.	3046	1909	Jas. Martin	Eganville	F. 1916	1
Dock	....	4209	Grade	4693	1913	A. N. Neitzel	Eganville	F. 1916	3
Imperial George	14406	511	Clyde.	1436	1911	Jas. L. Miller	Glasgow Station	F. 1916	1
Prince	....	3451	Grade	3896	1912	Wm. Schruder	Golden Lake	S. 1917	3
Champion	....	1878	Grade	2441	1908	Leo Zohr	Golden Lake	S. 1915	3
Patrick	....	4930	Grade	5458	1914	Albert Godin	Griffith	S. 1917	3
Whitekirk Prince	15621	4945	Clyde.	5305	1913	Foster Brothers	Hyndford	S. 1917	1
Racipault 3rd	....	4778	Grade	5120	1913	Albert Balafskie	Killaloe Station	S. 1917	3
Prince	....	4777	Grade	5108	1914	Peter Cybulski	Killaloe Station	S. 1917	3
Hudson	1519	1624	Per.	101	1907	Thos. Dunnigan	Killaloe	S. 1915	1
Marquis of Admaston	....	1702	Grade	2558	1910	Wm. Noack	Killaloe Station	F. 1916	3
Oceanic (imp.)	16672	4051	Clyde.	4558	1910	Wm. Verch	Killaloe Station	F. 1916	1
Conformation	652	411	Hack.	661	1910	Paul Vincent	Killaloe	F. 1916	1
Young McConnachie	....	4068	Grade	4394	1910	W. J. Johnston	Matawatchan	S. 1917	3
Mentar 2nd	....	4444	Grade	4954	1912	Jas. H. Coffee	Pembroke	S. 1916	3*
Joe Berry	076	4046	St. Br.	4159	1913	Jas. O'Kelly	Pembroke	F. 1916	1
Guinette Jr.	....	2432	Grade	141	1905	J. R. Pounder	Pembroke	S. 1915	3
Jess Willard	810	4729	Hack.	5250	1915	Jos. W. Robinson	Pembroke	S. 1917	1
Joural (imp.)	2137	520	Per.	1750	1909	Robt. Strutt	Pembroke	F. 1916	1
Perry	....	4302	Grade	4744	1913	Luke Vondette, Jr.	Pembroke	S. 1916	3*
Hector	....	4450	Grade	4618	1913	Hugh T. Wilson	Pembroke (R.R. 1)	S. 1916	3*

*Horse requires inspection.

RENFREW COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Royal Elegance	503	542	Hack.	1550	1907	August F. Woermke	Pembroke (R.R. 6)	F. 1914	1
Rainbow	....	741	Grade	1625	1902	Jas. E. Richards	Renfrew	F. 1914	3
King Todd	1300	4291	St. Br.	3041	1907	M. T. Stafford	Renfrew	S. 1916	1
The Young Haslize	....	4789	Grade	5312	1914	Maurice Culhane	Renfrew	S. 1917	3
Young Jones	....	4788	Grade	5308	1914	August Hoffman	Renfrew	S. 1917	3
Foremost (imp.)	13848	1120	Clyde	1240	1910	Robt. Graham	Renfrew	F. 1916	1
Wurtemburg	2215	4791	St. Br.	5320	1911	Allan Carswell	Renfrew	S. 1917	1
Golden West	482	4889	Hack.	5445	1908	Robt. Graham	Renfrew	S. 1917	1
Glenavon Premier (imp.)	701	2811	Hack.	3314	1910	M. T. Stafford	Renfrew	S. 1917	1
Terrington Gold Flask	737	4787	Hack.	5307	1912	M. T. Stafford	Renfrew	S. 1917	1
Jonas (imp.)	2996	714	Per.	1277	1909	Robt. Graham	Renfrew	F. 1916	1
Pride of Helsington (imp.)	11578	796	Clyde.	1832	1908	Robt. Graham	Renfrew	F. 1916	1
Hasli (imp.)	1560	452	Per.	1096	1907	John Mayhew & Co.	Renfrew (R.R. 2)	F. 1914	1
Reciprocity	....	2359	Grade	3081	1905	Thos. J. Whalen	Renfrew	S. 1915	3
Prince	....	4983	Grade	5461	1913	Jas. Wilson	Wilson	S. 1917	3
Prince	....	2459	Grade	3160	1910	A. C. Brash	Woito	F. 1916	3

RUSSELL COUNTY.

Rosebank's Fashion	9637	3142	Clyde.	3564	1909	W. E. Lowe	Bear Brook	F. 1916	1
Milo 3rd (imp.)	....	74	Grade	933	1899	Evangeliste Potvin	Bourget	F. 1912	3
Jeudi	....	3643	Grade	3333	1909	Bourget Horse Assn.	Bourget	S. 1916	3
Frank	....	4928	Grade	5455	1912	Albert Cayer	Casselman	S. 1917	3
Baron of Russell	18024	4810	Clyde.	5299	1914	Norman F. Wilson	Cumberland	S. 1917	1
Baron Kirkcowan (imp.)	11679	1321	Clyde.	1867	1908	John Fitzpatrick	Cumberland	F. 1916	1
Hableur (imp.)	2241	1827	Per.	1298	1907	John Fitzpatrick	Cumberland	F. 1914	1
Major	....	4904	Grade	5434	1914	Gedeon Burelle	Crysler	S. 1917	3
Campsie	....	2864	Grade	3389	1911	Elezeor Lamodeleine	Embrun	S. 1916	3*
Major	....	245	Grade	1405	1900	Albert Menard	Embrun	S. 1914	3
Prince	....	4870	Grade	5354	1905	Pierre Burelle	Embrun	S. 1917	3
Prince Ambrose Jr.	....	4893	Grade	5233	1913	J. V. Bourbonnais	Embrun	S. 1917	3
Rodger	....	4880	Grade	5298	1912	O. Charlebois	Embrun	S. 1917	3
Baby H.	....	4884	Grade	5417	1911	J. M. Bourdeau	Embrun	S. 1917	3

Banner Boy Jr.	....	582	Grade	267	1903	Cyrille Gascon	Leonard	F. 1912	3
Black Ward	....	3654	Grade	3984	1909	Jas. S. Fader	Marvelville	F. 1916	3
H. C. Wilkes	....	976	Grade	1860	1908	Alex. MacDougall	Marvelville	S. 1915	3
Golden Result	1204	4550	St. Br.	4974	1904	John B. Robinson	Navan	S. 1916	1
Joubert (imp.)	693	3379	Bel. Dr.	3848	1911	Jos. Lefebvre	Orleans	S. 1917	1
Northern Delta	1977	4921	St. Br.	5254	1914	Antoine Leduc	Orleans	S. 1917	2
Baron Morris	10426	1295	Clyde.	1966	1909	Wm. A. Morrow	Russell	S. 1916	1
B. B.	....	3334	Grade	829	1907	Hackett Cherry	Russell	S. 1916	3
Highland James	6709	1617	Clyde.	2374	1905	Thos. Herrington	Russell	S. 1913	1
Casino (imp.)	257	1062	Per.	831	1903	Donald Campbell	Russell	F. 1912	1
Despot (imp.)	10909	656	Clyde.	819	1909	Jos. D. Eadie	Russell (R.R. 2)	S. 1917	1
The Utterance	2345	4917	St. Br.	5416	1915	S. H. Merkley	Russell	S. 1917	1
Baron Clifty (imp.)	17266	4351	Clyde.	4813	1913	Wm. Meharey	Russell	S. 1916	1*
Golden Crown (imp.)	10656	1463	Clyde.	2127	1905	Wm. Meharey	Russell	F. 1914	1
Spotted Beauty	....	4553	Grade	5003	1912	Narcisse Rivard	St. Onge	S. 1916	3*
Sam Medium	....	4612	Grade	4938	1913	Alfred Lavaie	St. Felix	S. 1916	3*
Shiner	....	1508	Grade	1806	1905	Jos. Ouellette	Sarsfield	S. 1913	3
Gold Heels	1607	3825	St. Br.	4416	1913	Fred. W. Melvin	Vars	F. 1916	1
British Knight (imp.)	15238	2869	Clyde.	3402	1911	J. D. Eadie	Vars	S. 1916	1*
Justinless Fashion (imp.)	11303	435	Clyde.	826	1907	J. D. Eadie	Vars	F. 1914	1

SIMCOE COUNTY.

Athenian (imp.)	8110	2002	Clyde.	1641	1901	Wm. I. Edgar	Alliston (R.R. 2)	S. 1914	1
Lord Thomas (imp.)	11487	378	Clyde.	539	1908	Jno. McGill	Alliston	F. 1916	1
Montrave Rajah (imp.)	9548	553	Clyde.	542	1905	Jno. McGill	Alliston	F. 1914	1
The Reprobate	1694	3285	St. Br.	198	1899	W. J. Gilks	Allandale	S. 1914	1
Imperial Allerton	931	1402	St. Br.	448	1899	Jas. Hume & Albert Trent	Allandale	F. 1912	1
Baron Knot	13466	1129	Clyde.	1530	1908	Jervis Kearnan	Angus	F. 1916	1
Marshal Rosador (imp.)	590	4283	Hack.	4264	1909	G. F. Cole	Anten Mills	F. 1916	2
Major Dey	....	4519	Grade	5000	1904	Geo. L. Chapman	Athlone	S. 1916	3
Black Peer (imp.)	13806	1822	Clyde.	942	1910	Robt. Legget	Ballycroy	F. 1916	1
Marquis of Ailsa (imp.)	9809	757	Clyde.	1398	1908	Wm. Graham	Barrie	S. 1916	1
The Miracle	1984	2966	St. Br.	3539	1910	Wm. Graham	Barrie	F. 1916	1
Marshall Cormier	4831	4901	Per.	5353	1915	W. D. Bell & R. H. Cross	Beeton	S. 1917	1
Eldersile Patriot (imp.)	12634	340	Clyde.	264	1907	Cooper Hodgson	Beeton	F. 1914	1
Alcyonium Boy	1455	2214	St. Br.	924	1893	John Sutherland	Bond Head	F. 1912	1
Regal Direct	1370	2981	St. Br.	3486	1899	John Sutherland	Bond Head	F. 1914	1

* Horse requires inspection.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Celtic Baron MacQueen	15918	4581	Clyde.	4972	1913	W. J. Faris	Bradford	S. 1916	1*
Duke of Bondhead	14656	2178	Clyde.	2789	1910	George Mapes	Bradford	S. 1917	2
Duke of Montrose (imp.)	9561	1374	Clyde.	2302	1907	Frank Saint	Bradford	F. 1914	1
Royal Baron	4722	3870	Clyde.	4250	1900	Frank Saint	Bradford	F. 1914	1
Touchstone (imp.)	13846	1384	Clyde.	2304	1910	Frank Saint	Bradford	F. 1916	1
Prince Charming	....	2011	Grade	1572	1903	Charles Morrow	Colgan (R.R. 1)	S. 1915	3
Prince Marvel (imp.)	11493	1468	Clyde.	2294	1908	J. P. Rossitter	Colgan	F. 1916	2
Manor Brino	....	3789	Grade	4265	1912	George Wright	Collingwood	F. 1916	3
Oro Lambert Jr.	606	4847	St. Br.	513	1910	Benjamin Tesky	Collingwood	S. 1917	1
Baron Ratho (imp.)	7183	678	Clyde.	108	1902	W. H. Jebb	Cookstown	F. 1912	1
Paddy Todd	....	4217	Grade	3158	1910	R. H. Leadley	Cookstown	F. 1916	3
Pearl Finder (imp.)	4557	1008	Clyde.	716	1902	R. H. Leadley	Cookstown	F. 1914	1
Pearl Finder Junior	18946	4858	Clyde.	5391	1914	Henry Leadley	Cookstown	F. 1916	1
King Stalwart	13179	887	Clyde.	1699	1909	J. W. McLean	Cookstown	F. 1916	1
Scotia's Pride (imp.)	16331	4085	Clyde.	4235	1910	J. H. Readman	Cookstown	F. 1916	1
Captain Scott	....	2577	Grade	3242	1910	John & Edmund Moran	Craighurst	S. 1916	3*
Arcadius	....	1545	Grade	2234	1908	Wm. Sheffield & J. Brown	Craighurst	S. 1916	3
Karton (imp.)	3070	2312	Per.	2840	1910	Andrew Bowman	Craigvale	F. 1916	1
Gartly Recruit	17361	4820	Clyde.	5400	1915	Isaac L. Aikins	Creemore	S. 1917	1
Lord Stanley	9424	886	Clyde.	1698	1908	Geo. W. Taylor	Creemore	F. 1916	1
Oro Vero	1605	4852	St. Br.	4955	1914	Wm. Leach	Duntroon	S. 1917	1
Cacus Star	1997	4562	St. Br.	5021	1907	J. W. Manarey	Duntroon	S. 1916	1
Celtic Laird (imp.)	5413	1337	Clyde.	1674	1903	J. W. Manarey	Duntroon	F. 1914	1
Star of Roses (imp.)	3614	1101	Clyde.	1673	1899	J. W. Manarey	Duntroon	F. 1914	1
Royal Emblem	....	3550	Grade	3772	1908	H. & W. Hussey	Egbert	S. 1915	3
Anchor's Pride (imp.)	15220	3206	Clyde.	3727	1907	Hazel Edwards	Elmvale	F. 1914	1
Archie Gay	16718	4469	Clyde.	4763	1913	Joseph H. Edwards	Elmvale	S. 1916	1*
Timvale	2047	4557	St. Br.	4270	1912	Joseph H. Edwards	Elmvale	S. 1917	1
Duc De Maxwellton	4248	4987	Per.	5290	1913	Hazel Edwards	Elmvale	S. 1917	1
Arcadius (imp.)	3638	2140	Per.	2148	1903	Robt. J. Hisey	Elmvale	F. 1914	1
Harpon (imp.)	15	1488	Fr. Co.	541	1907	Andrew R. Murphy	Everett	F. 1914	1
Montrave Richards	17204	4422	Clyde.	4751	1914	Jas. Rusk	Everett	F. 1916	1
Prince Charles	....	4992	Grade	5483	1915	John Harper	Falkenburg	S. 1917	3
Simcoe King	....	4831	Grade	5297	1915	Fred Richardson	Fergusonvale	S. 1917	3
Baron Gartly Junior	....	1859	Grade	2665	1908	E. F. Quick	Foxmead	F. 1916	3
Pianiste (imp.)	3941	1821	Per.	1155	1902	Thos. Blain	Gilford	F. 1912	1

Gilford Craigie	19062	4824	Clyde.	5410	1915	Gilson Sawyer	Gilford	S. 1917	1
Dandy Mac	16522	4706	Clyde.	5190	1914	Alex. McArthur	Hawkestone	F. 1916	1
Moody Deveras	....	4912	Grade	5387	1912	F. W. Arksey	Hillsdale	S. 1917	3
King of Diamonds (imp.)	12486	217	Clyde.	1201	1909	Fitzgerald Brothers	Hillsdale	F. 1916	2
Binbrooke 2nd	....	195	Grade	182	1903	Leger Brunelle	Lafontaine	F. 1914	3
Baron De Thimeon (imp.)	312	47	Bel. Dr.	181	1905	Wilfrid Forget	Lafontaine	F. 1914	1
Liebniz (imp.)	3922	3031	Per.	3364	1911	Edward Maurice	Lafontaine	F. 1916	2
Joigny (imp.)	2340	93	Per.	695	1909	Walter Lawson	Lawson	F. 1916	1
Jimmy Glasserton	16306	4470	Clyde.	4806	1913	George Lovering	Lawson	S. 1916	1*
Pitcraigie Standard (imp.)	12509	875	Clyde.	1654	1909	Robt. Boyes	Lefroy	S. 1916	1
Prince Thomas	9322	1629	Clyde.	2426	1907	Chas. Northgraves	Lefroy	F. 1914	1
Cecilian Clay	....	2098	Grade	2586	1907	H. M. Stewart	Lefroy	S. 1915	3
Isly (imp).	3066	1433	Per.	2098	1908	Jos. Chappel	Minesing	F. 1916	1
Pride of New Mills (imp.)	9589	1635	Clyde.	561	1904	John A. McLucas	Mitchell Sq.	F. 1912	1
Barra Castle (imp.)	13910	1975	Clyde.	2808	1910	Adam Kennedy	Moonstone	F. 1916	1
Jay (imp.)	2262	1876	Per.	2618	1909	Archie Reid	Moonstone	F. 1916	1
Young Charlton 2nd	....	4698	Grade	5232	1910	W. J. Balkwill	Mt. Stephen	F. 1916	3
Prince of Wales	....	525	Grade	84	1909	Jas. Vivian	Mt. Stephen	F. 1916	3
Acme (imp.)	6187	784	Clyde.	1810	1897	Fred Mumberson	New Lowell	F. 1914	1
Baron Rowena (imp.)	4469	596	Clyde.	287	1903	Robt. Stephenson	New Lowell	F. 1912	1
Simcoe Boy	....	1040	Grade	926	1910	Thos. Copeland	Newton Robinson	F. 1916	3
Marin (imp.)	3684	2229	Per.	2265	1900	Albert E. Calverley	Orillia	F. 1914	2
Heart of Oak	....	2887	Grade	3379	1911	Robt. Ego	Orillia	S. 1916	3*
Beachly Boy	1414	4320	St. Br.	4743	1913	Chas. Jebb	Orillia	S. 1916	1*
Corinthian (imp.)	13824	2719	Clyde.	1147	1910	Kelly & Gaughan	Orillia	F. 1916	1
Lenoir (imp.)	4443	3714	Per.	4244	1911	J. M. Barnhardt	Oro Station	F. 1916	1
Baron Mac	12070	313	Clyde.	81	1909	Samuel Kissock	Oro Station	F. 1916	1
Upperton Prince (imp.)	11484	794	Clyde.	1791	1906	Chas. Wice	Painswick	F. 1914	1
Mac's Favourite	14143	2183	Clyde.	2068	1911	J. V. Dewell & Jos. McMurray.	Penetanguishene	F. 1916	1
Baron Minto (imp.)	13980	3877	Clyde.	4257	1906	James Leonard	Schomberg	F. 1914	1
Silver Birch (imp.)	8738	528	Clyde.	262	1905	Robt. Armstrong	Stayner (R.R. 1)	F. 1914	1
Felicity (imp.)	11490	1696	Clyde.	1658	1908	Neil Bell	Stayner	S. 1915	1
Royal Wildfire (imp.)	526	1181	Hack.	1522	1903	Neil Bell	Stayner	F. 1914	2
Viscount Humphrey (imp.)	15292	3255	Clyde.	3721	1910	Angus Buie	Stayner	F. 1916	1
Sandy Sylvander	....	4803	Grade	5392	1911	Donald McQueen	Stayner	S. 1917	3
Royal Saxon	468	4123	Hack.	4432	1905	James Moore	Stayner	S. 1915	2
Sir Lachlan (imp.)	6147	76	Clyde.	982	1896	Chris. Thomson	Stayner	F. 1914	1
Barglass 2nd	17072	4688	Clyde.	5051	1914	Herbert J. Hopkins	Sturgeon Bay	F. 1916	1
Tony Morgan	....	2027	Grade	2764	1907	Herbert J. Hopkins	Sturgeon Bay	F. 1914	3
King Grant	18747	4615	Clyde.	4841	1913	William Sharpe	Thornton	S. 1916	1*

*Horse requires inspection.

SIMCOE COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Royal Bob	....	2361	Grade	3084	1909	John Breedon	Tottenham (R.R. 3)	F. 1916	3
Intact (imp.)	2201	693	Per.	896	1908	Jas. McDevitt	Tottenham	S. 1917	1
Young Harmony	....	2343	Grade	3070	1911	Dan F. O'Leary	Tottenham	S. 1917	3
Simcoe King	15902	3414	Clyde.	3834	1911	John Semple	Tottenham	F. 1916	1
Montrave Rouser (imp.)	12114	692	Clyde.	894	1907	Alfred Jones	Vasey	F. 1914	1
Discoverer Jr.	4481	1336	Clyde.	1695	1905	Wm. McWatters	Vasey	F. 1914	1
Lord Archie (imp.)	13284	558	Clyde.	144	1908	Frederick Elliott	Wyebridge (R.R. 1)	F. 1916	1
Gameyvale 2nd	....	4062	Grade	4556	1911	Frank Wismer	Wyebridge	F. 1916	3
Gordon's Pride	....	3288	Grade	3767	1911	David Parent	Wyevale	F. 1916	3

STORMONT COUNTY.

Bladnoch's Heir	10323	751	Clyde	788	1907	J. W. Shaver	Avonmore	S. 1916	1
King David II	....	3018	Grade	3533	1905	J. W. Shaver	Avonmore	F. 1914	3
Chas. McGregor	....	4295	Grade	4802	1913	Chas. Meldrum	Berwick	S. 1916	3*
Silver Dick	....	4868	Grade	5333	1913	Abner Ouderkirk	Berwick	S. 1917	3
Lieutenant McQueen	8301	449	Clyde	929	1906	Wm. Crowe	Cannamore	F. 1914	1
Young Riley	....	1193	Grade	837	1906	Godfrey Laflamme	Cornwall (R.R. 2)	F. 1914	3
Gex (imp.)	406	1595	Per.	2178	1906	Cloutier Brothers	Crysler	S. 1916	1
Duke Junior	....	2809	Grade	1690	1910	John Ferguson	Crysler	F. 1916	3
Golden Rex	....	4623	Grade	5055	1912	Thos. H. Fleming	Crysler	S. 1916	3*
Mogar	....	4624	Grade	5062	1913	F. X. Briere	Crysler (R.R. 2)	S. 1916	3*
Borgie Lad (imp.)	....	1965	Grade	1073	1907	Jos. Boudrias	Crysler	F. 1914	3
Hydrophile (imp.)	1520	58	Per.	1121	1907	John H. Cameron	Finch	F. 1914	1
Joe Buston Euston	....	4353	Grade	4819	1913	Howard Vincent	Gallingertown	S. 1916	3*
Flander's Chief (imp.)	11789	87	Clyde	690	1908	John E. Runions	Mille Roche (R.R. 1)	F. 1916	1
Lord Gregor (imp.)	11433	1802	Clyde	2478	1908	Jas. Stewart	Moose Creek	F. 1916	1
Prince	....	1855	Grade	2622	1907	A. D. Valley	Moose Creek	F. 1914	3
Kirkland Chief (imp.)	....	4938	Grade	5442	1908	Nelson McRae	Moose Creek	S. 1917	1
Rob Roy Jr.	....	2029	Grade	2766	1910	J. W. Watson	Newington	F. 1916	3
Farmer's Pride	....	262	Grade	838	1907	J. W. Duvall	Newington	F. 1914	3
Emir King of the West	....	4331	Grade	4730	1911	Jas. P. Coughler	Northfield Station	S. 1916	3*
Sir Richard Cartwright	....	2886	Grade	1617	1903	Alex. A. McDonald	Northfield (R.R. 2)	S. 1914	3
Jasper (imp.)	7972	929	Clyde	854	1905	Wm. McColl	Northfield Sta. (R.R. 2)	F. 1914	2
Job Jr.	....	4899	Grade	5340	1914	Frank Eamer	Northfield	S. 1917	3

Bright Gay Prince	16052	3183	Clyde	3712	1913	Chas. G. Moore	Argyle	F. 1916	1
Starboard	1196	4782	Shire	5277	1914	Mossom Boyd Co.	Bobcaygeon	S. 1917	1
Bobcaygeon Amherst	134	4781	Suff.	5276	1913	Mossom Boyd Co.	Bobcaygeon	S. 1917	1
Silver Clink	5308	3318	Clyde	3395	1904	Leonard Dunn	Bobcaygeon	F. 1914	1
Lord Rufus (imp.)	5047	2670	Clyde	3042	1902	Arthur Cosh	Bobcaygeon	S. 1915	1
Royal Gallant	19226	4956	Clyde	5411	1914	Dunn Brothers	Bobcaygeon	S. 1917	1
Igne (imp.)	2264	526	Per.	229	1908	Jas. Humphries	Bobcaygeon	S. 1917	1
Prince Pride (imp.)	16209	4503	Clyde	4378	1913	S. J. McKinnon	Cambray	S. 1916	1*
The Golden Thistle	16035	3671	Clyde	4145	1912	H. W. Johnston	Cameron	F. 1916	2
Zippo	....	1787	Grade	1562	1909	R. J. Beggs	Cameron	S. 1917	3
Cairngorm	9274	787	Clyde	1815	1908	Vincent Dewel	Cameron	S. 1917	2
MacQueen's Crest	4519	2051	Clyde	1941	1905	Noble Perrin	Cameron (R.R. 2)	F. 1914	1
Prince of the Park 2nd	17804	4576	Clyde	4977	1912	Jas. Thorburn	Cresswell	S. 1916	1*
Keswick Chief	....	3739	Grade	4232	1904	Hugh Grant	Cresswell	F. 1914	3
Phil (imp.)	16366	4832	Clyde	5309	1912	M. McPhaden	Cresswell	S. 1917	1
Jerry J.	0101	4419	St. Br.	4926	1913	Simon Plewes	Coboconk	S. 1916	1*
Jacob (imp.)	3754	2803	Per.	3328	1909	John L. Davis	Dongola	S. 1916	1
Silver Ben	17353	4814	Clyde	5357	1914	Edward Costello	Downeyville	S. 1917	1
Benefactor	14165	4815	Clyde	5358	1912	Edward Costello	Downeyville	S. 1917	1
Black Pete	....	576	Grade	225	1902	John Aldons	Fenelon Falls	F. 1912	3
Lawrence Archer	2584	2754	Clyde	224	1899	Wm. E. Austin	Fenelon Falls	F. 1912	1
Golden Gloss	14444	3369	Clyde	3803	1911	Alfred Tears	Fenelon Falls	F. 1916	1
Dan Finister II	....	4396	Grade	4861	1913	Jas. Poulson	Fenelon Falls	S. 1916	3*
The Favourite Knight	6014	4	Clyde	1314	1903	A. J. Southern	Head Lake	F. 1914	1
Acme 2nd	11413	1526	Clyde	2105	1910	Jas. Gatchell	Kinmount	S. 1917	2
Sure Security	15571	4398	Clyde	4865	1913	Thos. Black	Kirkfield (R.R. 2)	S. 1916	1*
Belgrade	....	1021	Grade	1491	1903	Howard De Geer	Kirkfield	F. 1914	3
Sterling Silver	16784	3923	Clyde	4466	1913	Howard De Geer	Kirkfield	F. 1916	1
Arthur's Seat (imp.)	12029	338	Clyde	254	1908	Jos. McKenzie	Kirkfield	F. 1916	1
Dunure Heather (imp.)	12028	339	Clyde	255	1909	Jos. McKenzie	Kirkfield	F. 1916	1
Indiana Boy	....	1844	Grade	2554	1906	W. F. Broad	Lindsay	F. 1914	3
Herman Wenger	2420	4984	St. Br.	5469	1910	Thos. Hodgson	Lindsay	S. 1917	2
Fire Alarm	....	1501	Grade	938	1905	John Brock	Lindsay	S. 1915	3
Sir Leonard (imp.)	12108	532	Clyde	947	1908	John Brock	Lindsay	F. 1916	1
Golden Key (imp.)	9997	1570	Clyde	390	1906	Geo. Curtis	Lindsay	F. 1914	1
Roy Brook	....	4103	Grade	1207	1903	W. A. Fanning	Lindsay	S. 1915	3
Freier	73105	3543	Ger. Co.	3840	1905	John Hartnett	Lindsay	S. 1916	1

* Horse requires inspection.

VICTORIA COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Ardimersay Duke (imp.)	14240	3121	Clyde	2115	1905	Thos. Hodgson	Lindsay	S. 1913	1
Chimes Todd	1022	4939	St. Br.	4754	1910	Thos. Hodgson	Lindsay	S. 1917	1
MacInnes Jr.	3697	2614	Clyde	2348	1899	Wm. Mecallos	Lindsay	F. 1914	2
Borrow Moss (imp).	228	3539	Hack.	256	1898	Orin Parkin & A. Millage	Lindsay	F. 1912	1
Invincible Chattan	17952	4773	Clyde	5389	1913	Geo. Pogue	Lindsay	S. 1917	1
Golden Bloom (imp.)	12233	3417	Clyde	2390	1906	Geo. H. Spencley	Lindsay	F. 1914	1
Prince of Mertoun (imp.)	9591	364	Clyde	432	1907	Spratt & Parkins	Lindsay	F. 1914	1
Easy Fortune	11029	884	Clyde	1693	1910	Thos. H. Waldon	Lindsay (R.R. 4)	F. 1916	1
Prince Gartly	10284	581	Clyde	248	1909	Thos. H. Waldon	Lindsay	F. 1916	1
Black Bird	....	4638	Grade	5078	1913	James M. Pogue	Little Britain	S. 1916	3*
Rufus Darnley	17695	4525	Clyde	4854	1913	Jackson Brothers	Little Britain	S. 1916	1*
Earn Wilkes	....	2032	Grade	2790	1906	John Munro	Lorneville	F. 1914	3
Toronto Chief Jr.	....	3747	Grade	4227	1904	R. T. Edwards	Manilla	F. 1914	3
Napoleon	19045	4958	Clyde	5365	1915	A. A. Birchard	Oakwood (R.R. 1)	S. 1917	1
Nissouri's Mint	....	4636	Clyde	5069	1913	Hossack & Dundas	Oakwood	S. 1916	1*
Merryman	....	562	Grade	252	1906	F. P. Coad	Oakwood	F. 1914	3
Sir Gregor (imp.)	14756	1345	Clyde	727	1905	Samuel Fee	Omemee	F. 1914	1
Gay Prince	10782	2369	Clyde	3000	1907	Richard Hamilton	Omemee	F. 1914	1
Duke Royal	16694	4747	Clyde	5231	1914	Geo. A. McQuade	Omemee	F. 1916	1
Royal Jester (imp.)	6962	544	Clyde	431	1904	Wm. Kearns	Omemee	F. 1912	1
French Tim	....	4541	Grade	5030	1905	Owen Johnson	Omemee	S. 1916	3
Acme Prince 2nd	16735	4452	Clyde	4769	1913	Cyrus R. Hart	Omemee (R.R. 3)	S. 1916	1*
Canada Southern	....	2429	Grade	3137	1906	L. Wilson	Omemee	F. 1914	3
Dewdrop	17979	4732	Clyde	5121	1913	Wm. Gunn	Norland	F. 1916	2
Belle Boy	....	4175	Grade	4656	1912	John Lowery	Reaboro	S. 1917	3
Clan Favourite (imp.)	10654	1169	Clyde	1030	1905	Wesley Frise	Seagrave	F. 1914	1
Black Leader	17973	4595	Clyde	5048	1911	Wm. G. Rodman	Sonya	S. 1916	1*
Baron McGregor 2nd	11627	833	Clyde	1709	1910	Joseph Nugent	Woodville (R.R. 2)	S. 1916	1*
Baron Kitchener	13125	4607	Clyde	3288	1909	Percy Brown	Woodville	F. 1916	2
Atlantic	17573	4712	Clyde	5105	1914	Peter Morrison	Woodville	F. 1916	2
Gay Pacific	19175	4894	Clyde	5242	1914	Jos. Nugent	Woodville	F. 1916	2

Warwick Albert (imp.)	421	2854	Hack.	3304	1904	Wm. Robson	Ayr	F. 1914	1
Royal Marquis	12063	375	Clyde	516	1908	B. D. Turnbull	Branchton	F. 1916	1
Buccleuch (imp.)	134	2135	Thor.	2184	1901	John Richardson	Crosshill	S. 1913	1
Sphinx Messenger	....	3896	Grade	3981	1910	J. H. Bolender	Elmira	S. 1917	3
Gold Dust	11820	1648	Clyde	2239	1910	J. H. Bolender	Elmira	S. 1917	1
Strathcona	....	1217	Grade	2034	1910	Geo. H. Eisenbach	Elmira	F. 1916	3
Commodore A.	212	2466	St. Br.	2711	1909	J. W. Miller	Elmira	S. 1917	1
Royal Dragoon (imp.)	13849	3141	Clyde	1264	1911	J. W. Miller	Elmira	F. 1916	1
Guinea Gold	12853	3758	Clyde	4100	1911	Wm. Elliott	Galt	S. 1917	1
Charming King	15593	4613	Clyde	5066	1913	Cowan Brothers	Galt (R.R. 7)	S. 1916	1*
Chester Prince (imp.)	12364	1408	Clyde	2395	1905	D. S. Ferguson	Galt	F. 1914	1
Baron Acme (imp.)	5748	2103	Clyde	2907	1904	Geo. B. Ford	Galt (R.R. 1)	F. 1914	1*
Vortex	....	4025	Grade	4555	1909	Geo. R. Wilson	Galt	F. 1916	3
Swinburne (imp.)	15171	3066	Clyde	3433	1909	Geo. Forwell	Hawkesville	S. 1916	1
Lord Ivanhoe	17280	4972	Clyde	5459	1914	John Gildner	Kitchener	S. 1917	1
Invetere (imp.)	2367	1073	Per.	348	1908	J. Shantz & G. Buck	Kitchener	S. 1915	1
Mais (imp.)	6056	4761	Per.	5323	1912	Shantz & Markham	Kitchener	S. 1917	1
Highland Chief	....	2646	Grade	281	1900	Geo. Whitham	Kitchener	F. 1912	3
Hindsward Crest (imp.)	13767	1064	Clyde	634	1910	W. J. Beggs & Son	Linwood	F. 1916	1
Knight of Fairview	14155	2473	Clyde	2742	1910	John & Jos. Eisenmenger	Linwood	F. 1916	1
Knight of Glamis (imp.)	4533	1979	Clyde	1923	1902	Alfred Hewitt & Son	Linwood	S. 1913	1
Lord Glamis	12593	2661	Clyde	2016	1909	John Schneider	Linwood	F. 1916	2
Baron Rozelle	11554	3257	Clyde	3742	1910	Arthur Maynard	Millbank	S. 1917	2
Matchless (imp.)	....	454	Grade	1355	1906	Bock & Fried Bros.	New Dundee	S. 1914	3
Ali	1753	2388	Ger. Co.	526	1905	Gideon Bock	New Dundee	F. 1914	1
Roy Charming	11892	4101	Clyde	4550	1910	Jacob H. Bender	New Hamburg (R.R. 2)	F. 1916	1
Young Performer	....	3700	Grade	4103	1904	Robt. Hyde	New Hamburg	F. 1914	3
Baron Nicklas	16268	3902	Clyde	4453	1912	Daniel W. Seyler	New Hamburg	S. 1917	1
Scottish Baron (imp.)	4245	2779	Clyde	2715	1901	Daniel W. Seyler	New Hamburg	F. 1914	1
Casino	961	1071	Per.	354	1906	Jacob Steinmann & Son	New Hamburg	F. 1914	1
Jouir (imp.)	2921	1072	Per.	353	1909	Jacob Steinmann & Son	New Hamburg	F. 1916	2
Major	4497	4441	Per.	4937	1914	Jacob Steinmann & Son	New Hamburg	S. 1916	1*
Peace Maker	3376	3120	Per.	3643	1912	Jacob Steinmann & Son	New Hamburg	F. 1916	1
Fred Sidney	....	4454	Grade	5485	1914	A. K. Meyer	St. Clements	S. 1917	3
Favourite's Heir (imp.)	4545	322	Clyde	152	1901	Jacob S. Meyer	St. Clements	F. 1912	1
Fyvie Pearl (imp.)	18263	4959	Clyde	5372	1914	Jacob S. Meyer	St. Clements	S. 1917	1
Palatus	....	3025	Grade	3419	1910	Adam Scheffner	St. Clements	S. 1916	3*

* Horse requires inspection.

WATERLOO COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Coateswood	822	627	St. Br.	749	1905	Jos. Wideman	St. Jacobs	F. 1914	2
Lord Myrton (imp.)	14300	852	Clyde	1748	1910	James Ogram	Wallenstein (R.R. 1)	F. 1916	1
Texas Pirate	....	2031	Grade	2784	1896	J. H. Engel	Waterloo	F. 1914	3
Best Beau	....	2620	Grade	2518	1905	John R. Kaufmann	Waterloo	F. 1914	3
MacQueen of Wellesley	9412	1438	Clyde	2276	1906	Levi L. Martin	Waterloo	F. 1914	1
The MacQueen	13833	1439	Clyde	2275	1910	Adam Heipel	Wellesley	F. 1916	1
Redmichael (imp.)	7411	117	Clyde	785	1900	John Sherriffs	Winterbourne	F. 1914	1
Sam's Pride (imp.)	14613	4386	Clyde	4804	1910	John Sherriffs	Winterbourne	S. 1916	1*

WELLAND COUNTY.

Black Monarch	....	135	Grade	759	1909	Harvey Chambers	Chantler	F. 1916	3
Vizir De Peteghem (imp.)	593	2764	Bel. Dr.	3293	1909	Harvey Chambers	Chantler	S. 1916	1
Bay Star McKinney	....	799	Grade	1601	1909	J. C. Sloat & W. E. Baker	Fenwick & Hamilton	F. 1916	3
King Stanton	....	169	Grade	1095	1901	H. H. Fry	Fenwick	F. 1914	3
Galihier (imp.)	2203	2045	Per.	1524	1906	R. E. Kells	Fenwick	F. 1914	1
Justicier (imp.)	3033	1924	Per.	2213	1909	The Fonthill Per. Horse Ass'n.	Fonthill	S. 1916	1
Billy Direct	....	3108	Grade	3567	1907	Harold Lambert	Fonthill	S. 1915	3
Prince Keir	12211	2668	Clyde	3265	1910	F. B. Cooke	Fonthill	S. 1917	1
Lord Direct	020	1344	St. Br.	814	1901	J. P. Coan	Niagara Falls	F. 1914	1
Lord Roberts	589	4024	Shire	3214	1908	Geo. A. Misener	Niagara Falls S.	S. 1917	2
Goldbury (imp.)	449	2651	Hack.	816	1904	Jas. F. Snider	Niagara Falls	F. 1912	1
Royal Right	....	4953	Grade	822	1906	Spencer & Taylor	Niagara Falls	S. 1917	3
Kavaignac (imp.)	4468	4013	Per.	4087	1910	Ralph Plumb	Port Colborne	S. 1917	1
Central G.	0103	4529	St. Br.	4976	1902	S. Paonessa	Ridgeway	S. 1916	1
Clarion De Queuemont (imp.)	317	479	Bel. Dr.	731	1908	Frank M. Sherk	Ridgeway	F. 1916	1
Cardinal Holdenby	667	444	Shire	890	1909	M. W. Sexsmith	Ridgeway (R.R. 2)	F. 1916	1
Javelot (imp.)	3834	2878	Per.	3452	1909	Stevensville Horse Syn.	Stevensville	F. 1916	1
Chimes Echo Jr.	....	3164	Grade	3690	1910	Busch Brothers	Stevensville	F. 1916	3
Lord Wellington	456	4151	Shire	1049	1905	Frank Shier & Jacob Ruck	Stevensville	S. 1915	1
Prince Alcyoner	1861	4534	St. Br.	5022	1906	Robt. Bradley	Thorold	S. 1916	1
Brigadier General	2235	4768	St. Br.	5345	1912	Robt. Bradley	Thorold	S. 1917	1
Kaporal (imp.)	3839	3985	Per.	3382	1910	Ella Farr	Welland	S. 1916	1*

Blood Royal (imp.)	5430	797	Clyde	1834	1901	Robt. McConnell	Alma (R.R.1)	F. 1914	1
Baron Wallace (imp.)	11104	1771	Clyde	3210	1905	A. McDonald & Sons	Alma	F. 1914	1
Baron Senwick (imp.)	16408	3866	Clyde	4221	1911	Wm. Smith & Sons	Alma	F. 1916	1
Clan Ronald (imp.)	7287	1475	Clyde	2358	1905	Smith Brothers	Alma	F. 1914	1
Ariss MacMurchie	14422	679	Clyde	125	1910	John Ross	Ariss	S. 1917	1
Cyllene (imp.)	13908	1286	Clyde	1997	1907	Geo. W. Arnold	Arthur	F. 1914	1
Prince Orla (imp.)	4493	1886	Clyde	2093	1900	W. J. Church	Arthur	F. 1914	1
Dan McCune	....	3975	Grade	4411	1912	Michael Hefferman	Arthur	F. 1916	3
Lord Dewar (imp.)	13973	2067	Clyde	2655	1910	Michael Hefferman	Arthur	F. 1916	1
Sign of Riches (imp.)	6928	790	Clyde	1817	1898	Michael Hefferman	Arthur	F. 1914	1
Senator Ronald	18071	4965	Clyde	5352	1914	J. N. McNab	Arthur	S. 1917	1
Jack Connaught	....	4792	Grade	5322	1914	J. Justin Morrison	Arthur	S. 1917	3
Moncreiffe Charmer	15901	4964	Clyde	5112	1913	James J. Stack	Arthur	F. 1916	1
Prince Fragrant 2nd	....	2462	Grade	3165	1911	John H. Ellis	Belwood	S. 1916	3*
Lynal	....	2273	Grade	536	1899	Andrew Esson	Belwood	F. 1912	3
Montrave Envoy	16436	4269	Clyde	4708	1912	Wheeler & Lawson	Belwood (R.R. 5)	F. 1916	1
Lord Kimberley (imp.)	6111	2893	Clyde	3416	1904	Richard McLelland	Belwood (R.R. 1)	S. 1914	1
Montrave Magnus	8203	1724	Clyde	2488	1902	Jas. A. Milne	Belwood	S. 1915	2
Montrave Marcus	19002	4985	Clyde	5178	1914	Jas. A. Milne	Belwood (R.R. 1)	F. 1916	1
Little Billy	....	1208	Grade	2157	1908	Frederick Near	Ballinafad	S. 1917	3
All In All (imp.)	11883	1515	Clyde	535	1908	Henry Sargent	Belwood	F. 1916	1
Martin Luther	18016	4955	Clyde	5169	1915	Samuel Ferguson	Conn	F. 1916	1
Red Duke Junior	5863	4485	Clyde	4855	1903	Wm. McLean	Conn	S. 1916	2
Balcraig (imp.)	6496	563	Clyde	274	1904	Jacob Maurer	Clifford	F. 1912	1
George's Favourite	14716	3135	Clyde	3580	1912	Louis Wolfe	Clifford	F. 1916	1
Brookfield Laddie	579	1465	Hack.	2205	1906	J. F. Husband	Eden Mills	F. 1914	1
Prince of Craigton (imp.)	11482	4003	Clyde	4487	1909	J. F. Husband	Eden Mills	F. 1916	1
Whitegate Pimple (imp.)	806	3827	Hack.	2459	1912	J. F. Husband	Eden Mills	S. 1917	1
King's Seal (imp.)	6733	2762	Clyde	2405	1903	James Brander	Elora (R.R. 2)	S. 1913	1
Lord Moncrieffe	16363	4082	Clyde	4619	1911	Hugh Webster	Elora (R.R. 3)	F. 1916	1
The Moose	1834	4709	St. Br.	5177	1914	F. E. Hedden	Erin	F. 1916	1
Alnared	225	730	St. Br.	1694	1908	A. C. McMillan	Erin	F. 1916	1
Portrack Prince (imp.)	14770	1310	Clyde	1940	1900	John Wetherson	Everton	F. 1914	1
Haussmann	2275	3230	Per.	3684	1907	Thos. B. Broadfoot	Fergus	F. 1914	1
King's Justice (imp.)	12684	3140	Clyde	537	1910	Peter Davidson & Sons	Fergus	F. 1916	1
Slow Music	1920	4308	St. Br.	4771	1908	A. Groves	Fergus	S. 1916	1

* Horse requires inspection.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Willie Todd	....	3163	Grade	3686	1911	A. MacFadzean	Fergus	F. 1916	3
Present Fashion	7194	2269	Clyde	534	1904	J. Ransom & J. A. Duncan	Fergus	F. 1912	1
Maggie's Babe	15347	4589	Clyde	5050	1913	R. C. Rogerson	Fergus	S. 1916	1*
Prince's Dandy	16570	4705	Clyde	5179	1914	R. C. Rogerson	Fergus	F. 1916	1
Prince of Avon	3962	2529	Clyde	1759	1902	Ananias M. Martin	Floradale	F. 1914	1
Lord Charming	2264	583	Clyde	284	1893	R. Ballagh & Son	Guelph (R.R. 6)	F. 1912	1
Benefactor	15296	3367	Clyde	3830	1911	James Bowman	Guelph	F. 1916	1
Carot	....	1986	Grade	499	1902	Leslie Brothers	Guelph	F. 1912	3
Elmoore	3610	1978	Per.	2564	1910	Leslie Brothers	Guelph	F. 1916	1
Netherleigh Heir	18308	4772	Clyde	5386	1915	Richard Dickieson & Son	Guelph	S. 1917	1
Gros-Bec (imp.)	1554	2739	Per.	346	1906	Jesse D. Gale	Guelph (R.R. 4)	F. 1914	1
Isolia	....	4898	Grade	5338	1913	J. J. McAninch	Guelph (R.R. 4)	S. 1917	3
Lord MacQueen	....	3222	Grade	1460	1905	Wm. Fleet	Glenallan	F. 1914	3
Grandee's First	16633	4689	Clyde	4871	1914	D. Wilkinson & John Ritch.	Harriston & Drayton	F. 1916	1
Scotland's Charmer (imp.)	11305	2485	Clyde	3145	1908	Samuel Clark	Harriston	F. 1916	1
Baron Minto	19328	4989	Clyde	5482	1913	Peter Russell	Harriston	S. 1917	1
Lord Lamond (imp.)	11307	1837	Clyde	1984	1907	Thos. Harrison & Sons	Harriston	F. 1914	1
Loustic (imp.)	2261	2900	Per.	3467	1911	Thos. Harrison & Sons	Harriston	F. 1916	1
Bonnie Earl (imp.)	....	3219	Grade	3705	1909	Colin Davidson	Harriston	S. 1917	3
Inceste (imp.)	2363	3175	Per.	2425	1908	W. S. Redpath	Harriston	F. 1916	1
Gartly Grand	19111	4909	Clyde	5426	1914	A. Thompson	Hillsburgh	S. 1917	1
Belth Prince (imp.)	13757	3723	Clyde	1230	1910	John Wilkin	Harriston	F. 1916	1
Bonnie Hal	....	1961	Grade	2667	1907	W. J. Marriott	Hespeler	S. 1915	3
Bob Flemington	7918	3220	Clyde	2179	1905	George Berry	Hillsburgh	F. 1914	1
Image (imp.)	1659	2387	Per.	2923	1908	Jas. Carmichael & R. Davis.	Hillsburgh	S. 1917	1
Irmak (imp.)	1658	2386	Per.	2922	1908	Jas. Carmichael & R. Davis.	Hillsburgh	S. 1917	1
Ravenscraig (imp.)	16860	4004	Clyde	4577	1912	D. McKinnon & Sons	Hillsburgh	F. 1916	1
Sir John Junior	....	1703	Grade	2665	1902	Thos. Flahiff	Kenilworth	F. 1914	3
The Charmer (imp.)	6109	2142	Clyde	2466	1902	Moorefield Clyde Co.	Moorefield	F. 1914	1
Peerless (imp.)	....	425	Grade	745	1898	Isaac Ferguson	Mt. Forest	F. 1912	3
The Bison	279	3577	St. Br.	546	1899	M. J. O'Connell	Mt. Forest	F. 1914	1
St. Boswell (imp.)	4373	1775	Clyde	2522	1901	Neil A. Brown	Mt. Forest (R.R. 5)	S. 1914	1
Duke John (imp.)	12377	1474	Clyde	2357	1910	John Gilstorf	Mt. Forest (R.R. 1)	F. 1916	1
Lord McRaith (imp.)	11486	800	Clyde	1818	1908	Jonathan G. Moore	Mt. Forest	F. 1916	1
Scotland's Peer (imp.)	7650	2213	Clyde	913	1905	Colin Ray	Mt. Forest	S. 1915	1

Dunure Chieftain (imp.)	12450	750	Clyde	550	1909	Richard Overland	Orton (R.R. 3)	S. 1917	1
Crichton's Currie	8011	2760	Clyde	3103	1908	J. G. Tinney	Orton (R.R. 1)	S. 1915	1
Boston Hambletonian	....	1007	Grade	1629	1908	Wm. Usherwood	Ospringe	S. 1915	3
Brant Boy Jr.	....	2592	Grade	3004	1910	D. H. Welsh	Palmerston	F. 1916	3
Cranberry Model	14788	3107	Clyde	3581	1910	Jas. J. Hill	Rockwood (R.R. 3)	F. 1916	1
Young Michael	....	3868	Grade	4193	1911	Jas. E. Keough & Sons	Rockwood	F. 1916	3
Silver Duke	16586	4838	Clyde	5350	1914	Robt. Patterson	Rockwood	S. 1917	1
Intro (imp.)	1589	2334	Per.	2994	1908	W. H. Rothwell	Rothsay	S. 1916	1
Montrave Ronald (imp.)	10077	1432	Clyde	2092	1898	Fred J. Wilson	Rothsay (R.R. 1)	F. 1914	1
Holloway (imp.)	4962	2788	Clyde	1336	1899	Archibald McEachern	Terra Cotta	S. 1914	1
King Scott	14502	2740	Clyde	124	1908	Israel Shantz	Wallenstein (R.R. 2)	F. 1916	1

WENTWORTH COUNTY.

Euky	325	2322	St. Br.	512	1909	Hanley & Lebarr	Ancaster	F. 1916	1
Grayson	5543	4779	Per.	5202	1913	Fred. L. Horning	Ancaster	F. 1916	1
Sandy	....	1708	Grade	2581	1902	L. Taylor	Bartonville	S. 1915	3
Hal O.	....	296	Grade	1383	1904	W. G. Johnson	Binbrooke	S. 1913	3
Karrare (imp.)	3071	1476	Per.	2360	1910	Joseph Hutty	Binbrooke	F. 1916	1
Alchemist (imp.)	11882	889	Clyde	1502	1908	Joseph Hutty	Binbrooke	F. 1916	1
Harviestoun Fanatic (imp.)	656	720	Hack.	1195	1909	Emerson Johnson	Binbrooke	F. 1916	1
British Picador	....	281	Grade	1043	1897	Mathias C. Mann	Branchton	F. 1912	3
Lord Kinross (imp.)	....	382	Grade	501	1904	Thos. Wolseley	Campbellville	F. 1912	3
Admaston Nuggett	....	3575	Grade	1801	1905	John Gartshore	Dundas (R.R. 3)	S. 1916	3
Dominion Boy	975	1920	St. Br.	1728	1899	Geo. Bickell	Dundas	F. 1914	1
Peerless Ascott	12787	2867	Clyde	3357	1911	Wm. Woodley	Dundas	F. 1916	1
Young Rival	....	155	Grade	740	1899	Benjamin Hearns	Dundas	F. 1914	3
Brahmin (imp.)	14087	2304	Clyde	2986	1910	Donald C. Stewart	Dundas	F. 1916	1
Pure Gold	....	3326	Grade	3360	1901	W. Cartwright	Freelton	S. 1914	3
Parolist	1731	4417	St. Br.	4805	1902	Mrs. John Monk	Galt (R.R. 6)	S. 1916	2
Infernal (imp.)	1583	1926	Per.	1437	1905	Thos. W. Smith	Glanford Station	F. 1914	2
Karlos (imp.)	3820	3225	Per.	3618	1910	Thos. W. Smith	Glanford Station	F. 1916	1
Charles Edward	585	3741	Thor.	4310	1904	Geo. M. Hendrie	Hamilton, Box 164	S. 1915	1
Frank McGregor	....	295	Grade	1382	1898	W. Garwood Sheppard	Hamilton (R.R. 2)	S. 1915	3
C. The Limit	1099	2865	St. Br.	3326	1904	John L. Young, 57 Market St.,	Hamilton	F. 1914	2
The Star Patchen	040	651	St. Br.	736	1903	W. W. Brigham	Hannon (R.R. 2)	F. 1914	1
Robert De Marcq (imp.)	816	3433	Bel. Dr.	106	1900	I. L. Martin	Hannon	F. 1912	2

* Horse requires inspection.

WENTWORTH COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Judson MacQueen	....	4935	Grade	5381	1910	R. E. Woodworth	Lynden	S. 1917	3
Foxholes Swell (imp.)	....	3021	Grade	3566	1897	Wm. H. Reed	Mt. Hope	F. 1914	3
Oro Ree	1144	2783	St. Br.	1291	1901	Francis G. Green	Stoney Creek	F. 1914	1
Raith Standard (imp.)	16108	4238	Clyde	4702	1913	Jas. D. Weatherston	Troy	S. 1917	1
Kanak (imp.)	3836	2918	Per.	3422	1910	Arthur J. Kenyon	Vinemount	S. 1916	1*
Lord Ryckman	021	2843	St. Br.	3414	1910	G. E. Hildreth	Vinemount	F. 1916	1
King Everhi (imp.)	12798	279	Clyde	1172	1905	Jas. A. Watt & Sons	Vinemount	S. 1914	1

YORK COUNTY.

Baron Marcus	18282	4770	Clyde	5342	1914	A. E. Frisby	Agincourt	S. 1917	1
Sir Shapely	19254	4933	Clyde	5405	1914	Laurie Brothers	Agincourt	S. 1917	2
Surname's Pride	16459	4749	Clyde	4898	1914	Laurie Brothers	Agincourt	S. 1916	1*
Orlaf (imp.)	4505	4514	Per.	5001	1914	William Prophet	Agincourt	S. 1916	1*
Grandview Baron	11011	2842	Clyde	3365	1910	Mair Brothers	Aurora	S. 1916	1*
L'Sir Wilfrid Laurier (imp.)	2260	3845	Per.	4348	1911	J. F. Playter	Aurora (R.R. 2)	F. 1916	1
Hal Pointer	....	4974	Grade	5471	1904	Daniel Whitmore	Aurora	S. 1917	3
Prince Togo (imp.)	8788	717	Clyde	1234	1901	G. H. & D. Whitmore	Aurora	F. 1912	1
Barney Forrest	....	4658	Grade	5086	1908	Wesley Hill	Ballantrae	S. 1916	3
Bouncing Geordie (imp.)	14581	873	Clyde	1646	1909	Henry Shaw	Belhaven	F. 1916	1
Rosary Junior	....	3494	Grade	3920	1907	Thos. McCreight	Box Grove	S. 1915	3
Minto Chimes	....	3732	Grade	4689	1901	John Lachapelle	Brown Hill	S. 1915	3
Robbie MacGregor	8222	72	Clyde	905	1905	George Prout	Cedarbrae	S. 1915	2
Brutus	....	2776	Grade	2015	1902	B. F. Boake	Cedar Valley	F. 1914	3
Sprig of The Valley	16754	4231	Clyde	4677	1913	A. E. Reynolds	Cedar Valley	F. 1916	1
Coming Star (imp.)	15147	4507	Clyde	4985	1912	Jos. Kilgour	Eglington	S. 1916	1*
Craignair (imp.)	7793	910	Clyde	1564	1905	Cameron & Company	Etobicoke	S. 1915	1
Proud Chieftain (imp.)	9684	142	Clyde	735	1906	Cameron & Company	Etobicoke	F. 1914	1
Gallant Murray	14583	3008	Clyde	3363	1910	D. Howard & J. Eby	Fairbank	S. 1916	1*
Solidity (imp.)	18367	4839	Clyde	5362	1913	D. Howard & J. Eby	Fairbank	S. 1917	1
Cornton Gay Lad	14753	3022	Clyde	3588	1910	Robert Carlisle	Gormley	F. 1916	1
Earlmont	....	1825	Grade	2110	1905	Ernest Keetch	Gormley (R.R. 2)	F. 1914	3
Chieftain	4583	4488	Per.	4845	1914	Wm. A. Henry & Son	Keswick	S. 1916	1*

Buchez (imp.)	4615	1346	Per.	445	1901	Chalmer Black	Kettleby	F. 1912	1
Sir Walter	....	967	Grade	1836	1906	Munshaw Brothers	Kettleby	F. 1914	3
Buchlyvie Baron	19092	4845	Clyde	5419	1914	Hiram P. Davis	King	S. 1917	1
Elderslie (imp.)	9329	1306	Clyde	1946	1907	Richard Herman	King (R.R. 3)	F. 1914	1
Admidal Dinnie	15716	3244	Clyde	3698	1911	Jas. B. McClure	King	F. 1916	1
Victor Hugo	13464	802	Clyde	1824	1908	W. J. Wells & Son	King (R.R. 3)	F. 1916	1
Bingen Pilot	264	1309	St. Br.	519	1902	N. S. Goodison	Lambton Mills	F. 1912	1
Lawford Forest King	881	1947	Shire	159	1908	O'Brien & Ireland	Laskay	S. 1917	1
La Casa	290	346	Thor.	900	1908	John Bell	Lloydtown	F. 1916	1
Prince of Avondale	19249	4842	Clyde	5404	1913	O. H. Pugh	Locust Hill	S. 1917	1
Prince Aristos	....	4070	Grade	4597	1912	J. T. Ball	Markham	F. 1916	1
Right Forward	4363	3915	Clyde	2767	1901	W. D. Forster & G. R. Cowie.	Markham	S. 1915	1
Bonaday	1478	4766	St. Br.	5329	1907	F. J. Hassard	Markham	S. 1917	1
Netherby (imp.)	11778	1332	Clyde	1822	1908	T. H. Hassard	Markham	S. 1916	1
Peter Wilton	858	775	St. Br.	1489	1905	T. H. Hassard	Markham	F. 1914	1
Prince Ideal	38	1739	St. Br.	1196	1901	T. H. Hassard	Markham	F. 1912	1
Royal Review (imp.)	279	722	Hack.	1194	1904	T. H. Hassard	Markham	F. 1912	1
The Count of Hillcrest	15774	4502	Clyde	4960	1913	T. H. Hassard	Markham	S. 1916	1*
Hanoi (imp.)	1555	1840	Per.	2272	1907	W. H. Johnson	Markham (R.R. 2)	F. 1914	1
Captain Bryson	1661	3119	St. Br.	904	1900	H. C. Reesor	Markham (R.R. 1)	F. 1912	1
Baron Alton (imp.)	15295	3118	Clyde	3622	1911	Jas. Torrance	Markham	F. 1916	1
Baron's Court	18366	4759	Clyde	5379	1911	Jas. Torrance	Markham	S. 1917	1
Chattans Glory (imp.)	11480	890	Clyde	1507	1908	Jas. Torrance	Markham	S. 1917	2
Merry Baron (imp.)	17284	4475	Clyde	4969	1912	Jas. Torrance	Markham	S. 1916	1*
Sir James of Alton (imp.)	17283	4474	Clyde	4968	1910	Jas. Torrance	Markham	S. 1916	1*
Shannon Bank Mack	16548	4710	Clyde	4961	1914	W. H. Tran	Markham	S. 1916	1*
Dymond	....	2565	Grade	2165	1909	Robert Davis	Mt. Albert	F. 1916	3
Black Benedict (imp.)	3563	2262	Clyde	2730	1900	Herbert Foote	Mt. Albert	S. 1916	1
Bonnie Solway (imp.)	15293	2939	Clyde	3483	1911	W. J. Oldham	Mt. Albert	F. 1916	1
Bruce Pacific	17091	4748	Clyde	5191	1914	W. J. Oldham	Mt. Albert	F. 1916	1
Lord Minto	....	594	Grade	1575	1897	Amos Agar	Nashville	F. 1914	3
Ouse Bridge Champion	552	593	Shire	444	1906	Amos Agar	Nashville	S. 1915	1
Rockwood Charming Boy	14917	4172	Clyde	4641	1912	Edgar Dennis	Newmarket	S. 1917	1
Mac Ounce	109	2713	St. Br.	2590	1906	Gilford Mann	Newmarket	S. 1915	1
Fronsac (imp.)	41	2969	Fr. Co.	3434	1905	L. Pipher	Newmarket	S. 1914	1
Harley (imp.)	3826	2901	Per.	898	1902	Walter Randall	Newmarket	F. 1912	1
Glensman (imp.)	6809	3508	Clyde	903	1905	Fred. O. R. Simpson	Newmarket	F. 1914	1
The Saxon	848	3962	St. Br.	4475	1906	T. Skinner	Newmarket	S. 1915	1
Oro Boy	263	3465	St. Br.	514	1908	J. E. Walker	Newmarket	S. 1917	1
Newby Prince (imp.)	15148	2923	Clyde	3438	1911	Wm. Robinson	Newton Brook	S. 1917	1

* Horse requires inspection.

YORK COUNTY—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Duke of York	5251	888	Clyde	1500	1902	Wm. Ash	Oak Ridges	S. 1915	1
Nesbitt MacQueen	14643	782	Clyde	1498	1906	W. J. Hudgins	Oak Ridges	F. 1914	1
Shipmate	....	1023	Grade	1499	1901	W. J. Hudgins	Oak Ridges	F. 1914	3
Cruickston	1012	2266	St. Br.	2436	1903	Edward Mechan	Pefferlaw	F. 1914	2
Birchburn	16409	3869	Clyde	4220	1912	John A. Boag & Son	Queensville	F. 1916	1
Clarion (imp.)	15146	2922	Clyde	3437	1910	John Boag & Son	Queensville	S. 1916	1*
Lord Morven (imp.)	11457	1349	Clyde	1903	1908	J. B. Cowieson & Sons	Queensville	F. 1916	1
Tik-Tok	740	4501	Thor.	4886	1911	J. B. Cowieson & Sons	Queensville	S. 1916	1*
Ecureuil (imp.)	746	1150	Per.	1957	1904	Wm. G. Hill	Queensville	F. 1912	1
Lyon	1635	1152	Per.	1956	1909	Wm. G. Hill	Queensville	F. 1916	1
Harmony 2nd	12978	3148	Clyde	3635	1911	Edgar Powell	Queensville	F. 1916	1
Watnall King	1102	3123	Shire	3667	1912	J. B. Clark	Ravenshoe	F. 1916	1
Gallant Kyle	7959	1632	Clyde	642	1906	Henry Smith	Ravenshoe	F. 1914	1
Bethesda's Pride	15755	4200	Clyde	4668	1913	A. Sherrick	Ringwood	F. 1916	1
Gallant Marion	16924	4946	Clyde	5321	1914	Henry Smith	Ringwood	S. 1917	1
Lambton (imp.)	15299	2845	Clyde	3400	1911	John Fisher	Ringwood	F. 1916	1
Sir Leonard 2nd	17946	4834	Clyde	5317	1915	John Fisher	Ringwood	S. 1917	1
De Wilton (imp.)	634	3088	Hack.	3620	1906	H. A. Mason	Scarboro	F. 1914	1
Prince	1634	1517	Per.	2341	1909	F. Vivian	Scarboro Jct.	F. 1916	1
Gay Sprig (imp.)	7270	539	Clyde	1495	1904	R. L. Graham	Schomberg	F. 1914	1
Rex Edward	1063	2486	St. Br.	2637	1901	R. L. Graham	Schomberg	F. 1914	1
Chief of Frontview	5106	2781	Clyde	2931	1904	Thos. Jordon	Schomberg	S. 1916	2
Lord Tinto (imp.)	3633	1141	Clyde	2109	1898	Jas. McConnochie	Stouffville	S. 1913	1
Netherby Hero	15792	3324	Clyde	3804	1912	Robt. H. Spofford	Stouffville	F. 1916	1
Top Gallant Prince	16790	3882	Clyde	4452	1913	Robt. H. Spofford	Stouffville	F. 1916	2
Prince of Orange (imp.)	7848	2184	Clyde	1212	1905	Wm. Hadden	Sutton W. (R.R. 2)	S. 1915	1
Homestake King	16049	3258	Clyde	3748	1911	Jas. D. Hamilton	Sutton W.	F. 1916	1
Sir Leopold (imp.)	9747	1908	Clyde	2307	1901	John S. Johnston	Sutton W.	F. 1914	1
Furioso	....	1560	Grade	2345	1905	Charles Park	Sutton W.	F. 1914	3
Royal Rysdyk	....	1577	Grade	641	1903	Charles Park	Sutton W.	F. 1912	3
Baron Temple	16342	3752	Clyde	4280	1911	T. H. Legge	Temperanceville	F. 1916	1
Dunure Hallmark (imp.)	15378	2914	Clyde	3484	1911	Robert Cox	Todmorden	F. 1916	1
Judge Parker I	....	3453	St. Br.	2916	1902	Robt. Davies Estate	Todmorden	S. 1913	1
Calgary	410	4285	Thor.	4808	1910	Thorncliffe Stables	Todmorden	S. 1916	1*
First Sight	409	3936	Thor.	4346	1910	Thorncliffe Stables	Todmorden	S. 1917	2
Nealon	680	3455	Thor.	3777	1903	Thorncliffe Stables	Todmorden	S. 1915	1

Orme Shore (imp.)	701	3545	Thor.	2914	1901	Thorncliffe Stables	Todmorden	S. 1913	1
Billeneer	468	3627	Thor.	3977	1904	J. W. Barbour, 112 Dovercourt, Toronto		F. 1914	1
Bert Axworthy	1845	4286	St. Br.	4774	1908	T. A. Crow, Yonge & Isabella, Toronto		S. 1916	1
Ithamar	2227	4731	St. Br.	5293	1914	T. A. Crow, Yonge & Isabella, Toronto		S. 1917	1
Prickwillow Connaught (imp.)	747	4001	Hack.	4288	1899	T. A. Crow, Yonge & Isabella, Toronto		F. 1914	1
Knights Differ	308	4281	Thor.	4776	1909	Franklin J. Davies, 56 Wellesley, Toronto		S. 1916	1
Pan Lougin	885	4664	Thor.	5091	1900	Amelius Jarvis	Toronto	S. 1916	2
Kiosque (imp.)	4010	3885	Per.	3294	1910	Noble Johnston	Toronto	S. 1917	1
Dunure Captain (imp.)	14126	1299	Clyde	1961	1910	A. Gormley	Unionville	F. 1916	1
West Lowthian (imp.)	6753	1298	Clyde	1962	1902	F. H. Quantz	Unionville	S. 1915	1
Prince Allerton	....	1044	Grade	1117	1904	Geo. Arnold	Virginia	F. 1912	3
Jurat (imp.)	3253	1958	Per.	2545	1909	Noble Johnson	West Toronto	S. 1917	1
Cormier (imp.)	129	1628	Per.	2269	1902	Wm. Pears	West Toronto	S. 1915	1
Guedo (imp.)	2546	1692	Per.	1897	1906	Wm. Pears	West Toronto	S. 1915	1
Croton Forest King	1222	4725	Shire	5207	1915	John Gardhouse & Sons	Weston	F. 1916	1
Imola (imp.)	1607	4952	Per.	5450	1908	J. B. Hogate	Weston	S. 1917	1
Inceste (imp.)	1609	1405	Per.	12	1908	J. B. Hogate	Weston	F. 1916	2
Kaprice (imp.)	4009	3210	Per.	3717	1910	J. B. Hogate	Weston	F. 1916	1
Finot Jr.	....	2219	Grade	2937	1899	David Huson	Weston	S. 1915	3
Farmer	....	2405	Grade	3129	1909	W. F. Diceman	Woodbridge (R.R. 2)	S. 1916	3
Dandy	5542	4736	Per.	5205	1914	R. H. Livingstone	Woodbridge	F. 1916	1
The Principal	859	1813	St. Br.	1308	1901	W. H. O'Dell	Woodbridge	F. 1914	1

NEW ONTARIO.

ALGOMA.

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Frank	534	4127	Per.	4379	1906	J. J. McPhail	Bruce Mines	F. 1914	1
Golden Spark	14567	3443	Clyde	3866	1912	J. J. McPhail	Bruce Mines	F. 1916	1
Marquis (imp.)	3554	1581	Per.	240	1903	J. J. McPhail	Bruce Mines	F. 1914	1
Winona G.	171	1437	St. Br.	2145	1909	P. J. McAvoy	Bruce Mines	F. 1916	1
Joe Stanton	....	4668	Grade	4852	1905	J. J. Wright	Carterton	S. 1916	3
Grimpant	72441	3755	Per.	4107	1906	Chelmsford Horse Ass'n	Chelmsford	F. 1914	1
Gnome (imp.)	806	1969	Per.	2600	1906	Khull Brothers	Laird	F. 1914	1
Gazon (imp.)	29	3802	Fr. Co.	4175	1906	W. J. Nott	MacLennan	F. 1914	1

* Horse requires inspection.

ALGOMA—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Gaulis (imp.)	872	3706	Per.	3602	1906	G. A. Mooney	Massey	F. 1914	1
Royal Direct	14184	4669	Clyde	5101	1910	W. H. Tracey	Massey	S. 1916	1*
Superior II	3802	3978	Per.	4418	1908	Massey Percheron Horse Co.	Massey	F. 1916	1
Sidney Tone	....	4216	Grade	4603	1901	J. Ouellette	Massey Station	S. 1915	3
Vrowsky C.	....	2784	Grade	908	1904	John S. Wilson	Massey	F. 1912	3
Flash Prince II	....	3774	Grade	4343	1906	A. J. Campbell	Providence Bay	F. 1914	3
Landais (imp.)	3852	2873	Per.	3384	1911	A. G. Hyland	Richard's Landing	S. 1916	1*
Richard Dare	1691	3865	St. Br.	4122	1910	Cephas Broad	Rydal Bank	S. 1917	1
Innes Pride (imp.)	11790	4149	Clyde	4589	1908	Geo. Wilding	Sault Ste. Marie	S. 1915	2
Starlight	....	4136	Grade	4137	1905	J. C. Sholdice	Sault Ste. Marie	S. 1915	3
Spinxmore Jr.	981	3935	St. Br.	852	1902	Henry N. Brown	Steelton	F. 1912	1
Frisky Hal	032	2975	St. Br.	2193	1910	Laurence Bailey	Thessalon	S. 1916	1*
Rock	....	4412	Grade	4970	1912	Herman St. Louis	Victoria Mines	S. 1916	3*
Calgary	1348	3591	St. Br.	3881	1909	R. A. Gamble	Walford	F. 1916	2
Hindman's Perfection 2nr	3621	4049	Per.	4295	1911	The Wharncliffe Percheron Horse Company	Wharncliffe	F. 1916	1
KENORA.									
Dunrobin Laird	16378	4048	Clyde	4571	1913	A. R. Ascough	Kenora	F. 1916	1
HALIBURTON COUNTY.									
London	....	3601	Grade	3408	1905	Samuel Redner	Carnarvon	S. 1914	3
Haliburton Chief	657	4818	Shire	5384	1907	J. E. Hutchings	Haliburton	S. 1917	1
Prince of Willowbrook	2285	3196	Per.	3538	1911	Sydney Johnston	Lochlin	F. 1916	1
Trenton	....	4543	Grade	4798	1898	A. C. Jones	Minden	S. 1916	3
Oliver Prince	....	1553	Grade	2291	1908	Wm. Foster	West Guildford	F. 1916	3
MANITOULIN ISLAND.									
Luis 2nd	3431	2062	Per.	2541	1910	Geo. W. Brydges	Barrie Island	F. 1916	1
Baron Stirling 2nd	10434	3787	Clyde	4123	1906	Roy Brown	Big Lake	F. 1914	1
King Edward I	....	3664	Grade	4112	1902	Norman Campbell	Britainville	F. 1914	3
Scots Fir (imp.)	6894	3863	Clyde	4448	1902	Jas. McKinley	Evansville	F. 1914	1
Up-To-Date	....	4112	Grade	4637	1901	Jas. McKinley	Evansville	F. 1914	3
King Edward	....	1106	Grade	2081	1903	Aaron Walker	Gore Bay	F. 1914	3

MUSKOKA DISTRICT.

Royal Prince	....	4097	Grade	4585	1911	Peter Decaire	Bala, Box 93	F. 1916	3
King Ansonia	....	3685	Grade	4308	1902	Wesley Blackwell	Bracebridge	F. 1914	3
Black Stamp (imp.)	13149	1253	Clyde	2021	1910	Leishman & Watson	Bracebridge	F. 1916	1
Star Bingen	....	4925	Grade	4511	1910	R. Leishman	Bracebridge	S. 1917	3
Castelar King	3619	3683	Per.	4130	1910	Fred Morris & Jas. Carson	Bracebridge	F. 1916	1
Royal Range	14427	1591	Clyde	2368	1910	Samuel Skinner	Bracebridge	F. 1916	1
Don Alton	....	3669	Grade	4140	1911	Wm. L. Tibbett	Bracebridge	F. 1916	3
Royal Hugo	9769	1092	Clyde	1547	1909	Alexander MacKay	Dorset	F. 1916	1
Stanley Champion	....	955	Grade	1740	1905	Chas. Swanson	Emberson	S. 1914	3
Highland Sam	....	4257	Grade	4709	1906	Walter Hanes	Huntsville, Box 199	S. 1915	3
Feudal Chief (imp.)	13805	2967	Clyde	940	1910	Gifford & David Hollinshead	Huntsville	F. 1916	1
Glitter	....	3987	Grade	4139	1899	Joseph Lynch	Huntsville	S. 1915	3
Dannie McGregor	....	3972	Grade	4546	1908	Wesley Morrow	Muskoka Falls	S. 1915	3
Bonnie D (imp.)	13316	3670	Clyde	4141	1911	W. F. Somerset	Port Sydney	F. 1916	1
Bonnie Prince Charlie	9717	1636	Clyde	464	1909	Thos. Short	Reay	F. 1916	1
George Wilkes	....	4924	Grade	5274	1912	Thos. G. Patterson	Utterson	S. 1917	3
Simon MacGregor	3605	4187	Clyde	3301	1902	W. John Insley	Windermere	S. 1915	1

NIPISSING.

Hector	....	4207	Grade	4666	1910	William Boxwell	Alderdale	F. 1916	3
Prince	....	4672	Grade	5007	1912	Alex. Girard	Astorville	S. 1916	3*
John Lennox	....	4674	Grade	5085	1910	Etienne Beaulieu	Bonfield	S. 1916	3*
Intact (imp.)	4012	4493	Per.	896	1908	Lawrence McNulty	Bonfield	F. 1916	1
Hal Patron	....	3816	Grade	4299	1898	M. McKay	Charlton	F. 1914	3
Baron Northland	17848	4943	Clyde	5253	1915	Joe Raycroft	Charlton	S. 1917	1
Baron Everard (imp.)	15223	3449	Clyde	3894	1911	Geo. Tough	Charlton	F. 1916	2
Ismael (imp.)	2199	4327	Per.	4135	1908	Taylor Pipe	Cobalt	S. 1916	1
Gambert (imp.)	403	2376	Per.	1839	1906	Ovila Quesnel	Cochrane	F. 1914	1
Prince	....	4675	Grade	5102	....	Jas. O'Brien	Dill Siding	S. 1916	3*
Dick	....	4332	Grade	4731	1912	Sylva Tetreault	Dunnet	S. 1916	3*
Geranium	....	4671	Grade	4986	1904	Henry Taylor	Earlton	S. 1916	3
Fairbank	....	2506	Grade	3058	1909	Jos. Valiquette	Eau Claire	F. 1916	3
Bob	....	4108	Grade	4608	1904	F. Boulanger	Great Desert	S. 1915	3
Marley 3rd	....	4162	Grade	4661	1911	F. Lalonde	Hanmer	F. 1916	3
Castelar	225	2824	Per.	3354	1905	J. & S. Frieburger	Homer Siding	F. 1914	1

* Horse requires inspection.

NIPISSING—*Continued.*

Name of Stallion.	Can. Rec. No.	Enrolment No.	Breed.	Fyle No.	Date of Birth.	Name of Owner.	Address.	Date of Insp.	Form of Cert.
Young Victor	....	131	Grade	1139	1910	Young Victor Stock Co.	Matheson	F. 1916	3
Jack	....	21	Grade	1335	1908	Eusebe Wissell	Ouellette	S. 1915	3
Lord Kitchener	....	3821	Grade	4420	1903	J. A. Anderson	Powassan	F. 1914	3
Drummond Chief 2nd	....	4575	Grade	4924	1912	Joseph Rose	Rutherglen	S. 1916	3*
Coon	....	4095	Grade	4588	1907	J. D. Vachon	Sturgeon Falls	S. 1915	3
Noble Alcone	....	4456	Grade	4541	1907	Napoleon Villineuve	Sturgeon Falls	F. 1914	3
Farmer	....	4330	Grade	4727	1913	Noe Legault	Verner	S. 1916	3*
Prince Arbroath	14551	3687	Clyde	4063	1907	Roderick Steep	Verner (R.R. 1)	F. 1914	1

PARRY SOUND DISTRICT.

Chester B.	....	4193	Grade	4685	1905	Nelson Maybee	Berriedale	S. 1915	3
Garby (imp.)	421	4290	Per.	4563	1906	Jas. A. Marshall	Burk's Falls	S. 1915	1
Flash Lightning	653	3035	Hack.	3536	1908	W. Raaflaub & A. Keetch	Burk's Falls	F. 1916	1
Prince Alert	....	4180	Grade	4653	1912	Jas. Vanmeer	Burk's Falls	F. 1916	3
Baron Thomas	9005	2449	Clyde	3146	1908	Hugh & Jos. Varcoe	Burk's Falls	S. 1916	1
Celtic Guard (imp.)	10590	3452	Clyde	3898	1904	J. A. McDonald	Emsdale	F. 1914	1
Devitt's Bonny	2830	3986	Clyde	4144	1900	John A. Smith	Loring	S. 1915	1
Young Lampiste	....	3665	Grade	4125	1908	John Woods	Parry Sound	F. 1916	3
Charles	....	4949	Grade	5027	1911	Martin B. Rick	Powassan	S. 1917	3
Black Dick	....	4923	Grade	5270	1913	Fred Townson	Powassan (R.R. 3)	S. 1917	3
Gallant Marcellus	6845	4014	Clyde	4439	1906	W. H. Martin	Rosseau	S. 1915	1
King	....	4343	Grade	4757	1907	Fred Cottrell	South River	S. 1916	3
Major Cormier	3742	4334	Per.	4733	1913	W. J. Unger	South River	S. 1916	1*
Blacksmith Boy	11905	3667	Clyde	4134	1910	McCron & Taylor	Sprucedale	F. 1916	1
National	5732	3651	Clyde	386	1905	McCron & Taylor	Sprucedale	F. 1914	1
Norland	8862	52	Clyde	257	1907	W. H. Basso	Sundridge	S. 1915	1
Royal Alexander	10577	1087	Clyde	1611	1905	J. C. Cunningham	Sundridge	F. 1914	2
Prince Charles	12573	735	Clyde	1153	1910	Thos. F. Carr & Sons	Trout Creek	S. 1917	2

RAINY RIVER DISTRICT.

Sir Reuben	12109	3955	Clyde	4128	1908	Chas Fisher	Emo	S. 1915	1
Shire (imp.)	....	4864	Grade	5429	1899	Herbert Ogden	Emo	S. 1917	3
Stately Gem	12986	4102	Clyde	4527	1910	E. T. Murphy	Fort Frances	F. 1916	2
Golden Stately	12985	4113	Clyde	4472	1909	Jas. B. Cook	Rainy River	F. 1916	1
George Cymblain	....	3930	Grade	4473	1909	R. R. Johnston	Rainy River	F. 1916	3
King	....	4865	Grade	5430	1914	Malcolm McLeod	Stratton	S. 1917	3

TIMISKAMING.

Chief	....	4957	Grade	5467	1910	Wm. Tomblinson	New Liskeard	S. 1917	3
Government (imp.)	....	406	Grade	640	1905	S. Jewell & Son	New Liskeard	S. 1916	3
Jade (imp.)	....	1342	Grade	1543	1909	Jas. Foley	New Liskeard	S. 1917	3

THUNDER BAY.

Forest King	....	4677	Grade	4516	1910	Percy & Jos. Robillard	Port Arthur	S. 1916	3*
Young Baron	....	3791	Grade	4132	1906	E. T. Ross ...29 Balsam St.,	Port Arthur	F. 1914	3
Sir Rouncevalle	....	4107	Grade	4568	1902	F. W. Fraser	Fort William	S. 1915	3

SUDBURY.

Shire	....	4951	Grade	5425	1913	G. Bonin	Blezard Valley	S. 1917	3
Prince	....	4968	Grade	5344	1913	Jas. Hanrie	McFarlane Lake	S. 1917	3
Sir Leonard's Pride	....	4950	Grade	5422	1913	T. C. Young	Sudbury	S. 1917	3
Baron McPherson	....	2268	Grade	312	1910	T. C. Young	Sudbury	F. 1916	3

* Horse requires inspection.

PREMIUMS FOR STALLIONS

IMPORTANT NOTICE TO STALLION OWNERS.

According to new enrolment regulations, there will be four Certificates for enrolled horses in 1918. The highest class certificate will be called "Approved Form A. 1." The second class will be called "Passed, Form 1." The third class, "Defective, Form 2," and the fourth class "Grade, Form 3."

All horses having or eligible to receive an "Approved Form A. 1" Certificate, shall be entitled to receive a Special Inspection by a select committee of horsemen called "The Premium Inspection Board," this inspection to take place at the following Shows:—

Canadian National Exhibition, Toronto, 1917.
Western Fair, London, 1917.
Central Canada Exhibition, 1917.
Guelph Winter Fair, 1917.
Ottawa Winter Fair, 1918.

The Ontario Department of Agriculture wishing to encourage the keeping, in the Province for service, of the highest type of stallion, have instituted a premium system. Applicants will please note the following points:—

(1) Application should be made at once to the Office of the Secretary of the Ontario Stallion Enrolment Board.

(2) Horses passed on by the Premium Inspection Board and found to be sound, of superior conformation and of outstanding breed, character and type, shall be entitled, on being enrolled for that current year, to receive a premium certificate for that year only. The first Premium Certificates to be issued for the year 1918.

(3) These premium horses having stood or travelled in the Province of Ontario for the season for which the premium is issued, shall be entitled to a cash premium under the following conditions:—

(*a*) Satisfactory proof to be given that the horses have proved satisfactory foal getters.

(*b*) Where a stallion has got up to 35 and under 60 foals in his premium year, the premium shall be $50.

(*c*) Where a stallion has got 60 foals or over in his premium year, the premium shall be $100.

Inspection by the Premium Board to be free but does not, in any way, grant any privilege of dispensing with the regular inspection.

NOTES REGARDING INSPECTION, FALL 1917

(1) An alphabetical list of Counties is given, which shows the District in which each County is situated, and by referring to that District each stallion owner may ascertain the point most convenient for himself.

(2) Stallion owners will present horses at the hour stated, as the Inspectors have only a limited time to stay at each inspection point.

(3) All horses marked with a star in this Report require inspection, before they can be enrolled for 1918.

(4) Owners of pure-bred horses which do not need inspection to be enrolled for 1918, may present their horses for inspection in order that such horses may be recommended for a higher form of certificate, that is either "Approved A. 1," or "Passed form 1."

(5) The inspection for recommending a horse for a higher form of certificate is free, *but stallion owners will please note that if they do not avail themselves of the 1917 fall inspection to have their horses examined for an "Approved A. 1" or "Passed" Certificate, they will not be granted another opportunity to be recommended for a higher form of certificate for 1918.*

(6) If a stallion owner is in doubt regarding whether his horse requires inspection or not, he should present the horse in any case, as such inspection if not necessary would be free.

(7) All communications should be addressed to R. W. Wade, Secretary, Ontario Stallion Enrolment Board, Parliament Buildings, Toronto.

ROUTE OF STALLION INSPECTORS IN ONTARIO, SHOWING IN WHICH DISTRICT EACH COUNTY IS SITUATED

County.	In District Number.	County.	In District Number.
Brant	2	Middlesex	3
Bruce	4	Norfolk	2
Carleton	8	Northumberland	6
Dufferin	4	Ontario	5, 6
Dundas	7, 8	Oxford	2, 3
Durham	6	Peel	4, 5
Elgin	1, 2	Perth	3, 4
Essex	1	Peterborough	6
Frontenac	7	Prescott	8
Glengarry	8	Prince Edward	7
Grenville	7, 8	Renfrew	8
Grey	4	Russell	8
Haldimand	2	Simcoe	5
Halton	4, 5	Stormont	8
Hastings	7	Victoria	6
Huron	3, 4	Waterloo	3, 4
Kent	1	Welland	2
Lambton	1, 3	Wellington	4
Lanark	7, 8	Wentworth	2, 4
Leeds	7	York	5
Lennox and Addington	7	New Ontario	9
Lincoln	2		

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 1.

Consisting of the Counties of Essex, Kent and part of the Counties of Lambton and Elgin.

Place.		Time Inspection Commences.	Date.
St. Thomas	Queen's Hotel	10.00 a.m.	Wednesday, Oct. 17th
Port Stanley		3.00 p.m.	" " 17th
Dutton	McIntyre House	10.00 a.m.	Thursday, " 18th
Rodney	Royal Hotel	2.00 p.m.	" " 18th
Blenheim	Truax Feed Barn	8.00 a.m.	Friday, " 19th
Merlin		1.00 p.m.	" " 19th
Ridgetown	Arlington Hotel	7.30 a.m.	Saturday, " 20th
Leamington		11.00 a.m.	Monday, " 22nd
Kingsville		4.00 p.m.	" " 22nd
Harrow		11.00 a.m.	Tuesday, " 23rd
McGregor	The Hotel	3.30 p.m.	" " 23rd
Essex	Stot's Hotel	8.30 a.m.	Wednesday, " 24th
Windsor		11.00 a.m.	" " 24th
Belle River		1.00 p.m.	" " 24th
Tilbury	Balmoral Hotel	9.00 a.m.	Thursday, " 25th
Chatham	Garner Hotel	1.00 p.m.	" " 25th
Wallaceburg	Dupont Hotel	4.00 p.m.	" " 25th
Dresden	Westcott House	9.00 a.m.	Friday, " 26th
Sombra	Smith's Hotel	1.00 p.m.	" " 26th
Northwood		10.00 a.m.	Saturday, " 27th
Bothwell	Central Hotel	3.00 p.m.	" " 27th

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 2.

Consisting of the Counties of Norfolk, Haldimand, Welland, Lincoln, Brant, and part of the Counties of Wentworth, Oxford and Elgin.

Place.		Time Inspection Commences.	Date.
Ingersoll		1.00 p.m.	Wednesday, Oct. 17th
Tillsonburg		10.00 a.m.	Thursday, " 18th
Port Burwell	Commercial Hotel	1.30 p.m.	" " 18th
Walsingham Centre	Foster's Hotel	3.30 p.m.	" " 18th
Simcoe	Dr. Burt's Stable	10.00 a.m.	Friday, " 19th
Woodstock		5.00 p.m.	" " 19th
Innerkip		10.00 a.m.	Saturday, " 20th
Drumbo		3.00 p.m.	" " 20th
Paris	Canadian Hotel	8.30 a.m.	Monday, " 22nd
Brantford	Smith's Hotel	11.00 a.m.	" " 22nd
St. George	Cummings House	5.00 p.m.	" " 22nd
Harley	Geddies Stable	1.00 p.m.	Tuesday, " 23rd
Waterford	Olmstead's Stable	11.00 a.m.	Wednesday, " 24th
Hagersville	Evan's Feed Barn	3.00 p.m.	" " 24th
Caledonia		9.00 a.m.	Thursday, " 25th
Cayuga	Richard's Livery Barn	1.00 p.m.	" " 25th
Dunnville	Hall's Feed Barn	9.30 a.m.	Friday, " 26th
Ridgeway	White's Hotel	1.00 p.m.	" " 26th
Port Colborne		3.00 p.m.	" " 26th
Welland	Rice Hotel	4.30 p.m.	" " 26th
Smithville	Village Inn	1.00 p.m.	Saturday, " 27th
Niagara Falls	Spencer Maple Leaf Hotel	5.00 p.m.	" " 27th
St. Catharines	American Hotel	10.00 a.m.	Monday, " 29th
Grimsby	Van Dyke's Stables	2.30 p.m.	" " 29th
Stoney Creek		4.30 p.m.	" " 29th

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 3.

Consisting of the Counties of Middlesex and part of the Counties of Lambton, Huron, Perth, Oxford and Waterloo.

Place.		Time Inspection Commences.		Date.
New Hamburg	Imperial	10.30 a.m.	Wednesday,	Oct. 17th
Stratford	Commercial Hotel	2.00 p.m.	"	" 17th
Tavistock		5.00 p.m.	"	" 17th
Dublin		1.00 p.m.	Thursday,	" 18th
Mitchell	Hick's House	4.30 p.m.	"	" 18th
St. Paul		11.00 a.m.	Friday,	" 19th
Granton		2.00 p.m.	"	" 19th
St. Mary's	Constable's Hotel	4.30 p.m.	"	" 19th
Lakeside		9.00 a.m.	Saturday,	" 20th
Thorndale	Fairclock	2.00 p.m.	"	" 20th
Dorchester		9.00 a.m.	Monday,	" 22nd
London	Queen's Hotel	11.30 a.m.	"	" 22nd
Strathroy	American Hotel	3.00 p.m.	"	" 22nd
Komoka	Graham	4.30 p.m.	"	" 22nd
Appin		9.00 a.m.	Tuesday,	" 23rd
Walkers		3.00 p.m.	"	" 23rd
Alvinston	Revere House	5.00 p.m.	"	" 23rd
Brigden	Spooner's Hotel	11.30 a.m.	Wednesday,	" 24th
Oil City		4.00 p.m.	"	" 24th
Petrolia	Tecumseh House	9.00 a.m.	Thursday,	" 25th
Watford	Roger's Hotel	11.30 a.m.	"	" 25th
Wyoming	Central Hotel	2.00 p.m.	"	" 25th
Sarnia		4.30 p.m.	"	" 25th
Camlachie	Church Shed	10.00 a.m.	Friday,	" 26th
Forest	Franklin House	3.30 p.m.	"	" 26th
Thedford	Holwell	10.00 a.m.	Saturday,	" 27th
Parkhill	Arlington Hotel	3.30 p.m.	"	" 27th
Lucan		8.30 a.m.	Monday,	" 29th
Exeter	Central Hotel	10.30 a.m.	"	" 29th
Kirkton		2.00 p.m.	"	" 29th
Hensall	Commercial Hotel	8.30 a.m.	Tuesday,	" 30th
Goderich	Colborne House	1.00 p.m.	"	" 30th
Nile		4.00 p.m.	"	" 30th
Clinton	Rattenbury Hotel	9.30 a.m.	Wednesday,	" 31st
Blyth	Mason's Hotel	2.00 p.m.	"	" 31st
Seaforth	Kling's Hotel	9.30 a.m.	Thursday,	Nov. 1st

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 4.

Consisting of the Counties of Bruce, Grey, Wellington and Dufferin, and part of the Counties of Huron, Peel, Wentworth, Waterloo, Perth and Halton.

Place.		Time Inspection Commences.		Date.
Hamilton	Dominion Hotel	10.00 a.m.	Wednesday,	Oct. 17th
Flamboro		2.00 p.m.	"	" 17th
Campbellville		9.00 a.m.	Thursday,	" 18th
Galt	Iroquois Hotel	11.30 a.m.	"	" 18th
Kitchener	Grand Central Hotel	4.00 p.m.	"	" 18th
St. Jacobs		10.00 a.m.	Friday,	" 19th
Elmira	Zilliax Hotel	1.00 p.m.	"	" 19th
Guelph	Winter Fair Building	5.00 p.m.	"	" 19th
Fergus	Sargent's Hotel	10.30 a.m.	Saturday,	" 20th
Belwood	Murdoch's Hotel	5.00 p.m.	"	" 20th
Alton		1.00 p.m.	Monday,	" 22nd
Arthur	M. Bolger, Arlington Hotel	9.00 a.m.	Tuesday,	" 23rd
Mt. Forest	Collin's Hotel	2.00 p.m.	"	" 23rd
Harriston	Collison House	10.00 a.m.	Wednesday,	" 24th
Palmerston	Imperial Hotel	5.00 p.m.	"	" 24th
Listowel	Grand Central Hotel	9.30 a.m.	Thursday,	" 25th
Brussels	Gordon McDonald Hotel	1.30 p.m.	"	" 25th

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 4.—*Continued*

Place.		Time Inspection Commences.		Date.
Wingham	Queen's Hotel	10.00 a.m.	Friday,	Oct. 26th
Ripley	Commercial House	2.00 p.m.	"	" 26th
Teeswater		2.00 p.m.	Saturday,	" 27th
Mildmay		9.30 a.m.	Monday,	" 29th
Walkerton		2.00 p.m.	"	" 29th
Cargill		10.00 a.m.	Tuesday,	" 30th
Southampton		1.30 p.m.	"	" 30th
Allenford	Hotel	10.00 a.m.	Wednesday,	" 31st
Wiarton	Pacific Hotel	2.00 p.m.	"	" 31st
Owen Sound	Queen's Hotel	9.00 a.m.	Thursday,	Nov. 1st
Presque Isle		11.30 a.m.	"	" 1st
Silcote		4.00 p.m.	"	" 1st
Markdale	Markdale House	10.00 a.m.	Friday,	" 2nd
Proton	Wakey's Hotel	5.00 p.m.	"	" 2nd
Shelburne	Mowat's Livery	10.00 a.m.	Saturday,	" 3rd

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 5.

Consisting of the Counties of Simcoe, York, and part of the Counties of Ontario, Peel and Halton.

Place.		Time Inspection Commences.		Date.
Toronto		1.00 p.m.	Wednesday,	Oct. 17th
Erindale	Lamphier's Hotel	9.30 a.m.	Thursday,	" 18th
Weston	Central Hotel	3.30 p.m.	"	" 18th
Brampton	Victoria Hotel	10.00 a.m.	Friday,	" 19th
Georgetown	McGibbon's Hotel	3.00 p.m.	"	" 19th
Caledon East	Beamish's	8.30 a.m.	Saturday,	" 20th
Bolton	Queen's Hotel	1.00 p.m.	"	" 20th
Tottenham	Maple Leaf Hotel	9.00 a.m.	Monday,	" 22nd
Alliston	Dominion Hotel	1.00 p.m.	"	" 22nd
Creemore		9.30 a.m.	Tuesday,	" 23rd
Collingwood	Foulie's Hotel	2.30 p.m.	"	" 23rd
Thornbury		10.00 a.m.	Wednesday,	" 24th
Thornton		6.00 p.m.	"	" 24th
Barrie	Barrie Hotel	8.30 a.m.	Thursday.	" 25th
Elmvale	Queen's Hotel	2.00 p.m.	"	" 25th
Penetanguishene	Palmer House	10.00 a.m.	Friday,	" 26th
Coldwater	Temperance Hotel	4.30 p.m.	"	" 26th
Orillia	Orillia House	10.00 a.m.	Saturday,	" 27th
Beaverton		10.00 a.m.	Monday,	" 29th
Mt. Albert	Rea's Hotel	2.50 p.m.	"	" 29th
Sutton		4.30 p.m.	"	" 29th
Keswick		9.30 a.m.	Tuesday,	" 30th
Queensville		1.00 p.m.	"	" 30th
Newmarket	Prince George Hotel	4.00 p.m.	"	" 30th
Bradford	Queen's Hotel	8.00 a.m.	Wednesday,	" 31st
Aurora		10.30 a.m.	"	" 31st
Agincourt		4.30 p.m.	"	" 31st
Markham	Andrew's Hotel	9.30 a.m.	Thursday,	Nov. 1st
Locust Hill		4.00 p.m.	"	" 1st
Claremont		10.00 a.m.	Friday,	" 2nd

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 6.

Consisting of the Counties of Victoria, Durham, Peterboro, Northumberland and part of the County of Ontario.

Place.		Time Inspection Commences.		Date.
Bowmanville	Bowman House	10.00 a.m.	Wednesday,	Oct. 17th
Whitby		3.00 a.m.	"	" 17th
Myrtle	Birnie House	10.00 a.m.	Thursday,	" 18th
Port Perry	Sebert House	8.00 a.m.	Friday,	" 19th

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 6.—*Continued.*

Place.		Time Inspection Commences.		Date.
Manilla		1.30 p.m.	Friday,	Oct. 19th
Sunderland		9.00 a.m.	Saturday,	" 20th
Cannington		2.00 p.m.	"	" 20th
Woodville	McRea's Hotel	10.00 a.m.	Monday,	" 22nd
Kirkfield	The Hotel	9.00 a.m.	Tuesday,	" 23rd
Coboconk		11.00 a.m.	"	" 23rd
Kinmount	Dettman House	5.00 p.m.	"	" 23rd
Fenelon Falls	McArthur House	10.00 a.m.	Wednesday,	" 24th
Lindsay	Mander's Hotel	9.00 a.m.	Thursday,	" 25th
Omemee	Commercial Hotel	2.00 p.m.	"	" 25th
Peterboro	Munro Hotel	10.00 a.m.	Friday,	" 26th
Bethany Jct.		5.00 p.m.	"	" 26th
Port Hope	Queen's	9.15 a.m.	Saturday,	" 27th
Campbellcroft		10.45 a.m.	"	" 27th
Indian River		9.00 a.m.	Monday,	" 29th
Havelock		1.30 p.m.	"	" 29th
Hastings		9.00 a.m.	Tuesday,	" 30th
Campbellford	Kerr's Hotel	3.30 p.m.	"	" 30th
Morganstown		10.30 a.m.	Wednesday,	" 31st

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 7.

Consisting of the Counties of Hastings, Prince Edward, Lennox and Addington, Frontenac, Leeds and part of the Counties of Grenville, Dundas and Lanark.

Place.		Time Inspection Commences.		Date.
Trenton	White's Livery Barn	11.30 a.m.	Wednesday,	Oct. 17th
Wellington	Alexandria Hotel	4.00 p.m.	"	" 17th
Picton	Globe Hotel	10.00 a.m.	Thursday,	" 18th
Belleville	Hotel Quinte	10.00 a.m.	Friday,	" 19th
Foxboro	Rose Temperance House	2.30 p.m.	"	" 19th
Eldorado	Jones' Temperance House	10.00 a.m.	Saturday,	" 20th
Bancroft		9.00 a.m.	Monday,	" 22nd
Maynooth	Dan Smith's House	2.30 p.m.	"	" 22nd
The Ridge		2.30 p.m.	Tuesday,	" 23rd
Tweed	Hynch House	9.30 a.m.	Thursday,	" 25th
Erinsville		3.00 p.m.	"	" 25th
Harrowsmith	Dan Grave's Hotel	10.30 a.m.	Friday,	" 26th
Napanee	Royal Hotel	2.30 p.m.	"	" 26th
Odessa		10.00 a.m.	Saturday,	" 27th
Wolfe Island	Island Inn	2.30 p.m.	"	" 27th
Kingston	Grimason Hotel	9.30 a.m.	Monday,	" 29th
Gananoque	Shield's Hotel	3.00 p.m.	"	" 29th
Brockville	Central Hotel	10.00 a.m.	Tuesday,	" 30th
Athens		4.00 p.m.	"	" 30th
Westport	Hogan's Hotel	12.30 p.m.	Wednesday,	" 31st
Smith's Falls	Russell House	9.30 a.m.	Thursday,	Nov. 1st
Perth	W. J. Flett	1.30 p.m.	"	" 1st
Lanark	Victoria Hotel	4.00 p.m.	"	" 1st
Spencerville	Johnson's Hotel	10.00 a.m.	Friday,	" 2nd
Morrisburg	Windsor Hotel	9.30 a.m.	Saturday,	" 3rd

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 8.

Consisting of the Counties of Renfrew, Carleton, Russell, Stormont, Prescott and Glengarry and part of the Counties of Lanark, Grenville and Dundas.

Place.		Time Inspection Commences.		Date.
Ottawa	Howick Pavilion	10.00 a.m.	Wednesday,	Oct. 17th
Carp	Dooley House	2.00 p.m.	"	" 17th
Fitzroy Harbor		10.30 a.m.	Thursday,	" 18th
Admaston		3.30 p.m.	"	" 18th
Pembroke	H. E. Jenk's Hotel	10.00 a.m.	Friday,	" 19th
Beachburg	Tracey's Hotel	4.30 p.m.	"	" 19th

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 8.—*Continued.*

Place.		Time Inspection Commences.		Date.
Pakenham		1.00 p.m.	Saturday,	Oct. 20th
Carleton Place	Queen's Hotel	9.00 a.m.	Monday,	" 22nd
Stittsville	Geo. Green's Hotel	1.00 p.m.	"	" 22nd
Richmond	Reilly House	2.00 p.m.	Tuesday,	" 23rd
North Gower	J. McCurdy's Hotel	3.30 p.m.	"	" 23rd
Osgoode Station	Nixon's Hotel	5.00 p.m.	"	" 23rd
Kemptville	McPherson House	10.30 a.m.	Wednesday,	" 24th
Winchester	Winchester Hotel	8.00 a.m.	Thursday,	" 25th
Chesterville	McCluskey's Hotel	1.00 p.m.	"	" 25th
Northfield		8.30 a.m.	Friday,	" 26th
Cornwall		10.30 a.m.	"	" 26th
Gallingertown		2.00 p.m.	"	" 26th
Lancaster	Hunter's Hotel	5.30 p.m.	"	" 26th
Glen Robertson		10.30 a.m.	Saturday,	" 27th
Alexandria	Ottawa Hotel	9.00 a.m.	Monday,	" 29th
Glen Roy		11.00 a.m.	"	" 29th
Martinstown	Commercial	3.00 p.m.	"	" 29th
Crysler	A. M. Robert's Hotel	1.00 p.m.	Tuesday,	" 30th
Embrun		9.00 a.m.	Wednesday,	" 31st
South Indian		2.00 p.m.	"	" 31st
Hammond		8.00 a.m.	Thursday,	Nov. 1st
Plantagenet	Boleau's Hotel	10.30 a.m.	"	" 1st
Alfred	Prescott Hotel	4.00 p.m.	"	" 1st
St. Eugene	Windsor Hotel	9.00 a.m.	Friday,	" 2nd

ROUTE OF STALLION INSPECTORS IN DISTRICT NO. 9.

Consisting of the Districts of Northern Ontario.

Place.	Time Inspection Commences.		Date.
Bracebridge	3.30 p.m.	Wednesday,	Oct. 17th
Utterson	10.00 a.m.	Thursday,	" 18th
Huntsville	4.30 p.m.	"	" 18th
Dorset	1.00 p.m.	Friday,	" 19th
Sprucedale	10.00 a.m.	Saturday,	" 20th
Emsdale	2.00 p.m.	"	" 20th
Burk's Falls	5.00 p.m.	"	" 20th
South River	1.00 p.m.	Monday,	" 22nd
Astorville	3.00 p.m.	Tuesday,	" 23rd
Bonfield	1.00 p.m.	Wednesday,	" 24th
Cobalt	4.30 p.m.	Thursday,	" 25th
New Liskeard	9.00 a.m.	Friday,	" 26th
Homer	4.00 p.m.	"	" 26th
Cochrane	10.00 a.m.	Saturday,	" 27th
Charlton	5.30 p.m.	"	" 27th
Verner	1.00 p.m.	Monday,	" 29th
Massey	11.00 a.m.	Tuesday,	" 30th
Bruce Mines	5.00 p.m.	"	" 30th
MacLennan	10.00 a.m.	Wednesday,	" 31st
Richard's Landing	3.00 p.m.	"	" 31st
Steelton	9.00 a.m.	Thursday,	Nov. 1st
Thessalon	3.30 p.m.	"	" 1st
Gore Bay	9.00 a.m.	Saturday,	" 3rd
Evansville	11.00 a.m.	"	" 3rd
Big Lake	3.00 p.m.	"	" 3rd
Victoria Mines	2.00 p.m.	Monday,	" 5th
Chelmsford	11.00 a.m.	Tuesday,	" 6th
Port Arthur	11.00 a.m.	Wednesday,	" 7th
Rosseau	p.m.	Thursday,	" 8th

THIRTEENTH ANNUAL REPORT

OF THE

ONTARIO

Vegetable Growers' Association

1917

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE)

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

To His Honour, Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I herewith present for consideration of your Honour the Annual Report of the Ontario Vegetable Growers' Association for 1917.

Respectfully yours,

W. H. Hearst,

Minister of Agriculture.

CONTENTS

PAGE

Officers for 1918 5

Annual Convention 7

President's Address: J. J. Davis 7

Report of Secretary-Treasurer: J. Lockie Wilson 11

Report of Vegetable Specialist: S. C. Johnston 20

Progress of the Survey of Ontario Vegetable Growing: F. F. Reeves 23

Insecticides and Fungicides: L. Caesar 29

Uplift of the American Vegetable Growers' Association: G. B. Hellerman 33

Potato Culture and Marketing: Douglas Maynard 37

Growing Vegetables Under Glass: J. J. Davis 43

Shipping Tomatoes: W. R. Dewar 47

The Growing of Cauliflower: Chas. Syer 51

The Cultivation and Growing of Melons: V. Robinet 52

The Value of Garden Competitions: W. T. Macoun 54

Co-operative Market Gardening: Geo. Rush 57

Experiments in Vegetable Growing at Vineland: O. J. Robb 61

Address: W. B. Roadhouse 65

Pennsylvania Market Garden Methods: R. H. Garrahan 67

Caring for Spring Tomatoes: C. W. Waid 75

Soaking Seeds Before Planting: A. E. Wilkinson 76

Exhibiting Vegetables at Fairs 78

Early Potato Seed Sprouted 79

Vegetable Growing in New Jersey: L. C. Schermerhorn 79

The Handling and Marketing of Onions and Celery: A. H. MacLennan 81

Ontario Vegetable Growers' Association

OFFICERS AND DIRECTORS, 1918

President: J. J. Davis, London, R.R. 7.

First Vice-President: E. K. Purdy, Kingston.

Second Vice-President: Maurice May, Tecumseh.

Secretary-Treasurer and Editor: J. Lockie Wilson, Toronto.

Directors: C. Guthrie, Stratford; H. L. Bailie, Billings Bridge; E. E. Smith, Ealing; J. H. Modeland, Sarnia, R.R. 3; W. S. Eborall, Beamsville; T. K. Aymer, Humber Bay; Thos. Delworth, Weston; F. F. Reeves, Humber Bay; Wm. Guthrie, Sarnia, R.R. 1; J. W. Smith, Sarnia, R.R. 1; A. Nelson, Fonthill.

Executive: J. J. Davis, E. K. Purdy, Maurice May, J. Lockie Wilson, F. F. Reeves, Thos. Delworth.

Exhibit at C. N. E., 1917.

Ontario Vegetable Growers' Association

THIRTEENTH ANNUAL CONVENTION.

The Annual Convention of the Ontario Vegetable Growers' Association was held at 22 College St., Toronto, on Friday, Feb. 15th, 1918, with delegates present from all parts of the Province.

PRESIDENT'S ADDRESS.

J. J. Davis, London.

I am pleased to welcome you to the Thirteenth Annual Convention of the Ontario Vegetable Growers' Association, and I am glad to see a good attendance of representatives from the various Branches, as it indicates a growing interest in the work and welfare of our Association.

I am pleased to note that the Department of Agriculture is taking an ever increasing interest in vegetable growing, and that during the past year a comprehensive survey of the vegetable industry was made and much valuable information gathered; also that it is proposed to add a short course in vegetable gardening to the list of short courses at the Guelph College. This is a new departure, and it promises to be a most interesting one. I came before a class there one day last week, and spoke to them on various garden crops, and I can testify to their eagerness to acquire information as evidenced by the numerous questions addressed to me.

I also understand that the Department of Agriculture is taking up the growing of seed potatoes, and intends to grow potatoes for seed in Northern Ontario. This is a very important matter both to vegetable growers and farmers, and one which has often been discussed at our Conventions, and it will have a far-reaching influence for good in the production of potatoes in Ontario, if the seed crop is grown under the supervision of the Department of Agriculture, and kept free from diseases. I should like to emphasize this because I judged potato crops both in old Ontario and in the North country last year, and I found more disease in some plots in the North than in old Ontario. The disease called "black leg" was quite prevalent, in some plots to as much as five per cent., and no one seemed to know what it was, or how it came. I advised them to go over the plots and dig out all the affected hills before harvesting the crop, or else get seed from some one whose crops they knew to be free from it.

Now I come to a question of vital importance to us all, and that is the question of luxuries in war time. I am unable to define what a luxury is, and I have not yet met anyone who can. It seems to be a matter of opinion and of means: for instance, to a man with a large family and an income of ten or twelve dollars a week, I suppose greenhouse lettuce is a luxury, but to a man with no family and the same income it is not. However, there is a feeling in some quarters that greenhouses should be closed during war time, because their products are luxuries. Now suppose we define luxuries to mean any and everything that we could squeeze along without during the war, and see where that would lead us. We should have to include greenhouse products and several of the outdoor vegetables, all fruits,

domestic and foreign, all products of biscuit factories, cereal factories, candies, tea, coffee, chocolate, cocoa, all musical instruments, jewellery, and a host of other things (as the auctioneer says) which are too numerous to mention, and the result would be that instead of being the red-blooded people which our boys at the front have shown us to be, we would be a nation of dyspeptics and anaemics, and besides that we should have an army of men, women, girls and boys thrown out of employment, and who could not be absorbed by other industries, because other industries would become partially crippled through the loss of business involved in the shut down.

However, we are most greatly concerned about our own business, and I am going to present a few reasons why our business should be kept going. In the first place, greenhouse vegetables have a dietetic value out of all proportion to their cost. This can be proved by the daily newspaper, because some of the papers are running a health column presided over by a medical man, and if you read that column you will be surprised at the frequency with which fresh vegetables are advised by the doctor in comparison with drugs. Now let me relate a conversation in which I became interested while waiting for a belated train one day last week. A group of commercial men were carrying on a desultory conversation, and one remarked that notwithstanding the severity of the weather he had not suffered from a cold this winter; another said that he had noticed that colds were not as prevalent this winter as usual, and anyway he believed that people were much healthier than they used to be; another one remarked that there must be something in that because the chief business with drug stores this winter is not drugs, but accessories. Now piece this together and you have an unsolicited and disinterested testimonial to the value of greenhouse vegetables. People are healthier than formerly, yet they are buying less drugs, because they are following the doctor's advice and are eating fresh vegetables.

Another very important phase of greenhouses is that they enable us to keep our help the whole year round. If we were to close our greenhouses, we must of necessity let our help go in the fall, and there is no alternative for them but to seek winter employment in the cities, and thus many a good man would be lost to the land forever.

Another important side of the question is that we are not producing nearly all the fresh vegetables which are being consumed in our country, and it is a fact that thousands of dollars are being sent out of our country to purchase the same class of produce, and surely this importation should stop before Canadian industries are closed.

The greenhouse bears an important relation to outdoor crops in that those crops are very materially advanced by the plants being grown in them until warm weather comes and then transplanted outside, and there is no doubt that food production outside would be seriously curtailed during the first four months of the summer, and also the supply of plants would be cut off from the vacant lot gardeners and the farmers. I know it may be urged that plants may be grown in hot-beds, but there is not one-quarter enough sash or manure in the country to meet requirements, and to go back to hot-beds would be like a farmer going back to the grain-cradle.

Money is needed to win the war, and I am pleased to say that the greenhouse industry of London has invested about $15,000 in Victory Bonds, and more will be needed, but how are we going to invest any more unless we stay in business and earn it? Earnings are of prime importance, for we must earn before we can save.

I am deeply sorry to know that since we last met in Convention some of you have lost sons at the front; and as many more of us have sons over there, and we do not know how soon it may be our turn. To men who have made the larger sacrifice, it is superfluous to talk about making smaller sacrifices, yet I feel that we are justified in protesting against being called upon to make needless sacrifices which will not be of any material aid to our country.

It is reported in a Toronto paper of yesterday that a movement is on foot within the City Council to pass a law compelling farmers and vegetable growers to pay a license for the privilege of selling their products within the city. It seems to me that this is an unreasonable and ill-advised step, and can only result in hindering the sale of food products and in adding to the already high cost of living.

F. F. Reeves, Humber Bay: I wish to congratulate our President on the address he has given. There is one thing I would like to say with regard to the greenhouse work. During a trip last year before the coal shortage was so acute as

Teaching practical truck farming to High School pupils.

it is now, one of the principal things that came to my attention was the necessity of the greenhouse. If we were to go back to the hot-bed, it would be as though the farmer had to throw down his machinery and resort to the cradle. To increase production we must have the greenhouse. If the Government had any intention of curtailing the supply of coal for the greenhouse, it would be very disastrous to us, and instead of furthering production would retard it.

Moved by F. F. Reeves, seconded by W. S. Eborall: "That this Convention of Vegetable Growers do earnestly protest against any curtailment of our industry during war time, as we believe that the products of our greenhouses are a material addition to the outdoor crops, and are of vital necessity to the well-being of the people." Carried.

A Member: Did I understand that sellers of our products around the city will require a license?

J. J. Davis: Yes.

A Member: Does that include merchants?

J. J. Davis: They have to pay a license now.

A MEMBER: What is the object?

J. J. DAVIS: To get revenue for the city.

F. F. REEVES: As I understand it, the revenue of the city was under discussion, and this suggestion was made by Ald. Blackburn, and referred to the Board of Control, but has not been passed by them. But if it is passed, and sent to the Legislature, the Vegetable Growers as a body will be opposed to it. We had the same thing up about fifteen years ago. It went as far as the Legislature, but did not become law. From information that we got at that time they could not pass an act of that nature. It was contrary to the British North America Act that the producer should not have the privilege of selling his product where he liked. At that time they wanted to keep us off the main streets and restrict us to the side ones.

J. J. DAVIS: This seems to be a perennial affair, not only in Toronto, but in London. There is, however, an agreement between the county of Middlesex and the city of London which protects us in regard to this, and I have heard it said that there is a similar agreement between Toronto and the county of York. However, it is up to us to look after ourselves, but there is not much use crying before we are hurt.

PROF. MACOUN: I was much interested in your remarks regarding the question of getting seed potatoes throughout Ontario. Our returns in Ottawa have shown that we secured two to three times the crop from potatoes from northern parts of the country, and these results have been borne out by tests. During the summer we had 400 bushels to the acre from seed potatoes from Port Arthur, and only 85 from seed grown in Ottawa for a number of previous years. All our tests bear out the same thing. I believe that, if every grower secured his potato seed from Northern Ontario or New Brunswick or the Prairie Provinces, the crop in Ontario would be doubled. I am a member of the Potato Advisory Council, and I understand that every effort will be made to have crops grown in Northern Ontario free from disease. The Agricultural College at Guelph will take this up.

J. J. DAVIS: We have had up before our Convention several times the matter of getting seed from Northern Ontario, and I am glad the Department is taking it up, and I think some of us have proved that northern grown seed has an advantage over the local grown.

A MEMBER: Is the district of Muskoka sufficiently far north to get good results?

PROF. MACOUN: Dr. Zavitz' returns at Guelph have shown that seed grown in Muskoka gives much better results than seed grown at Guelph.

J. J. DAVIS: I saw some very fine crops in Algoma last fall, but also some that I certainly would not care to take seed from.

F. F. REEVES: We got seed from Muskoka and New Liskeard some years ago, and the seed from Muskoka was just as good as it was from farther north. We discontinued getting it because of the heavy transportation charges, and then, too, the initial price of potatoes was somewhat higher than here.

HY. BROUGHTON, Sarnia: I have been growing potatoes for a good many years, and from Northern grown seed for some eight or ten years, and I find a great advantage in using the Northern grown seed as compared with that from Ontario. The results after the crop is grown is an increase from twenty per cent. and in some cases as high as forty per cent. in the crop. Several of our men in that district have given up saving their own seed altogether. We import the seed from the North every year. There is a good deal in feeding the crop, as well as

changing the seed. You cannot expect to get as good results from Northern grown seed on soil that is not fed properly. You must feed your crop, and you must clean your crop. Some people have the idea that all you have to do to get an extra big yield is to change your seed. That is not altogether correct. But I would advise anyone who can get Northern grown seed to use it.

J. J. Davis: The question of price, of course, is an important one, and while Northern grown seed costs a little more than seed grown here, I expect that some day we shall get wise enough to know that it pays to pay a little more for good seed.

Dr. Sinclair: This subject should be dealt with very thoroughly. I have grown potatoes in Parry Sound. We really have no trouble with disease there, but we do with frost. It would be well to have the suggestion of Prof. Macoun dealt with very fully, as there are people in that district, small growers, who have twenty to thirty bushels more than they require.

J. J. Davis: I understand that the Department will not be able to supply much seed this year. They are going to start operations this year, and next year they can tell us where certified seed can be procured.

Prof. Macoun: I understand that the Provincial Government are in touch with the growers in New Brunswick this year, and could inform any vegetable grower where he can get seed. The Provincial Government is getting several carloads themselves, but they also know where there is a large quantity of good seed in addition to that.

Mr. Housser, Pickering: I have been getting seed from Nelles & Clark. It is guaranteed to be Government inspected. The Government told me to go to them.

REPORT OF THE SECRETARY-TREASURER.

J. Lockie Wilson, Toronto.

I am pleased to be able to report a fairly successful year for vegetable growers, whose operations throughout the Province have been marked by diligent work and progressive horticulture. Our members who operated greenhouses were considerably handicapped by the high price and scarcity of coal. In many instances they were obliged to discontinue their intensive operations under glass, but, notwithstanding these drawbacks and the fact that thousands of vacant lot gardens were utilized by the urban population, they have had a reasonably good season. As in previous years, the labour problem has proved a serious obstacle, but in spite of these almost insurmountable difficulties, the Ontario Vegetable Grower is an optimist, and in war time he is willing to do his part and, if he breaks even, he does not complain.

We continued in 1917 our crop competitions, and the ones selected were: Early potatoes, tomatoes, celery and onions. These crops, on the whole, were above the average, and the exhibits at the Canadian National and Central Canada Exhibitions and Western Fair were never surpassed. Our members are all well pleased with the result of their endeavours in this regard. They have proved a great incentive to the eradication of weeds and destruction of fungous diseases. The garden crop competitions conducted by our Association are proving of great educational and financial value to those who enter. One difficulty that has arisen is the lack of a uniform system of judging which, we hope, will be remedied in the near future by the holding of Short Courses for our vegetable judges, similar to those arranged by the Government for Departmental Judges.

In order that our members may be kept closely in touch with the manner in which their crops are judged, the following are the score cards used both for the field crop and the garden competitions, and if any of our members have any suggestions to make as to any changes they may think necessary, we shall be glad to have them carried out, if approved of by the Convention:

POTATOES.

	Possible Score.
1. General appearance, considering:	
(*a*) Method of planting, stand of crop	7
(*b*) Vigor of growth	8
2. Freedom from blight and insects	17
3. Method and thoroughness of cultivation	20
4. Purity of variety	10
5 Apparent yield, considering:	
(*a*) Weight of marketable potatoes per sq. yd.	18
(*b*) Quality, smoothness and uniformity of shape	10
(*c*) State and uniformity of maturity and freedom from sunburn	10
Total	100

TOMATOES, CELERY AND ONIONS.

	Possible Score.
1. General appearance of crop, considering:	
(*a*) Method of planting, stand of crop	15
(*b*) Vigor of growth	5
2. Freedom from blight and insects	10
3. Thoroughness of cultivation	15
4. Uniformity of type and purity of variety used	10
5. Market value	45
Total	100

GARDEN COMPETITION.

	Possible Score.
Layout and general arrangement, considering:	
(*a*) Straightness of rows and proper spacing of plants	10
(*b*) Arrangement of space in garden	10
(*c*) Neatness and cleanliness around buildings and yards.	10
(*d*) Neatness, care and cultivation	40
(*e*) Clean fence corners, headlands, pasture plots	10
(*f*) Closeness of planting and marketable value of crop per acre considered	20
Total	100

If points are lost owing to natural difficulties impossible to overcome, the judge may allow a maximum of 5 points.

Owing to war conditions your Executive have decided that it would not be good policy at this time to increase the number of our Branches. In the competition for increased membership, the following Branches are the prize winners: 1st, Stratford; 2nd, Clinton and Louth; 3rd, London.

I beg to submit for your approval the Financial Statement which shows that the Association has had a fairly prosperous year and that we are building on a stable foundation.

FINANCIAL STATEMENT.

November 30th, 1916, to November 30th, 1917.

Receipts.

Balance on hand from 1916	$775 53	
Grant	800 00	
Membership fees	61 30	
Entry fees for Field Crop Competition	171 00	
Entry fees for Garden Competition	39 00	
		$1,846 83

Expenditures.

Wreath for the late Hon. J. S. Duff	$20 45	
Prizes for Garden Competition	288 00	
Prizes for Field Crop Competition	350 00	
Auditor	5 00	
Expenses to Directors' meetings	17 35	
Executive meetings, services and expenses	104 30	
Prizes in Membership Competition	45 00	
Present for Mr. F. C. Clement	10 00	
Photos for Annual Report	6 00	

Vegetable grounds at Vineland Station.

Stenographic services	15 00	
Vegetables for exhibit at C.N.E., Toronto, 1916	4 50	
Vegetables for exhibit at C.C.E., Ottawa, 1916 and 1917	14 00	
Stationery	25 00	
Cartage	5 00	
Petty cash	5 00	
Boxes for exhibits at Toronto, London and Ottawa	50 00	
Stencil for boxes	1 70	
Balance on hand	880 53	
		$1,846 83

PRIZE WINNERS.

District No. 1.

Potatoes:

Prize.	Name and Address.	Branch.
1	E. K. Purdy, Cataraqui	Kingston.
2	B. Lancaster, Cataraqui	Kingston.
3	John Baker, Cataraqui	Kingston.
4	W. J. Downing, Trenton, R.R. 2	Belleville.
5	Wm. Trick, Ottawa	Ottawa.
6	Cooke Bros., Cataraqui	Kingston.

DISTRICT No. 2.

Prize.	Name and Address.	Branch.
1	T. K. Aymer, Humber Bay	Toronto.
2	J. Dandridge, Humber Bay	Toronto.
3	W. A. Broughton, Whitby	Toronto.
4	Tizzard Bros., Humber Bay	Toronto.
5	H. M. Rittenhouse, Beamsville	Clinton and Louth.
6	C. Plunkett, Weston, R.R. 2	Toronto.

DISTRICT No. 3.

1	J. J. Davis, London, R.R. 7	London.
2	G. W. Bycroft, London, R.R. 7	London.
3	R. Sanderson, London, R.R. 7	London.
4	W. R. Trott, London West	London.
5	K. Whitlaw, London, R.R. 8	London.
6	R. Benstead, Strathroy	London.

DISTRICT No. 4.

1	H. R. Dent, Sarnia, R.R. 3	Blackwell.
2	Chris. Dent, Sarnia, R.R. 1	Sarnia.
3	Geo. Bridger, Sarnia, R.R. 1	Sarnia.
4	Fred. Somes, Sarnia, R.R. 3	Sarnia.
5	Henry Broughton, Sarnia, R.R. 1	Blackwell.
6	W. A. Craig, Sarnia, R.R. 3	Sarnia.

DISTRICT No. 1.

TOMATOES:

1	Jas. Cox, Cummings Bridge	Ottawa.
2	J. Harris & Son, Belleville	Belleville.
3	B. Lancaster, Cataraqui	Kingston.
4	Wm. Trick, Ottawa	Ottawa.
5	Cooke Bros., Cataraqui	Kingston.
6	Jno. McMullen, Cummings Bridge	Ottawa.

DISTRICT No. 2.

1	F. F. Reeves, Humber Bay	Toronto.
2	C. Aymer, Humber Bay	Toronto.
3	T. Aymer, Humber Bay	Toronto.
4	Tizzard Bros., Humber Bay	Toronto.
5	Art Carlton, Lambton Mills	Toronto.
6	Ed. Worgan, Weston, R.R. 1	Toronto.

DISTRICT No. 3.

1	J. J. Davis, London, R.R. 7	London.
2	R. Sanderson, London, R.R. 7	London.
3	G. W. Bycroft, London, R.R. 7	London.
4	F. G. and C. W. Fuller, London, R.R. 7	London.
5	D. A. MacInnes, London	London.
6	R. Dengate, Ealing	London.

DISTRICT No. 4.

1	Stephen Sylvestre, Maidstone, R.R. 2	Tecumseh.
2	C. A. Wilson, Sarnia, R.R. 3	Sarnia.
3	S. A. Guthrie, Sarnia	Sarnia.
4	Maurice May, Tecumseh, R.R. 1	Tecumseh.
5	Jos. Mayrand, Belle River, R.R. 1	Tecumseh.
6	W. A. Thrasher, Sarnia	Sarnia.

DISTRICT No. 1.

ONIONS:

Prize.	Name and Address.	Branch.
1	Geo. Riley, Aylmer, Que.	Ottawa.
2	Jas. Cox, Cummings Bridge	Ottawa.
3	Wm. Trick, Ottawa	Ottawa.
4	T. Mulligan, Harbord, Ottawa	Ottawa.
5	B. Lancaster, Cataraqui	Kingston.
6	I. A. Farquharson, Aylmer, R.R. 2	Ottawa.

DISTRICT No. 2.

1	C. Aymer, Humber Bay	Toronto.
2	Ed. Worgan, Weston, R.R. 1	Toronto.
3	Jas. Dandridge, Humber Bay	Toronto.
4	Geo. Kappler, Fenwick	Welland.
5	Tizzard Bros., Humber Bay	Toronto.
6	F. F. Reeves, Humber Bay	Toronto.

DISTRICT No. 3.

1	C. W. Dempsey, Stratford	Stratford.
2	F. Gard & Son, London, R.R. 7	London.
3	K. Whitlaw, London, R.R. 7	London.
4	P. W. Jean, London, R.R. 8	London.
5	W. E. Crandall, Ingersoll	London.
6	Jno. Norris, Eagle Place	Brantford.

DISTRICT No. 4

1	Geo. Bridger, Sarnia, R.R. 1	Sarnia.
2	W. A. Craig, Sarnia, R.R. 3	Sarnia.
3	Fred. Somes, Sarnia, R.R. 3	Sarnia.
4	W. A. Thrasher, Sarnia	Sarnia.
5	Robt. Ridealgh, Sarnia, R.R. 1	Sarnia.
6	V. Robinet, Tecumseh	Tecumseh.

DISTRICT No. 1.

CELERY:

1	Cooke Bros., Cataraqui	Kingston.
2	J. Harris & Son, Belleville	Belleville.
3	Jno. Baker, Cataraqui	Kingston.
4	Wm. Trick, Ottawa	Ottawa.
5	C. E. Post, Brighton, R.R. 4	Central.
6	Geo. Elvins, Belleville	Belleville.

DISTRICT No. 2.

1	A. Bell, Humber Bay	Toronto.
2	Art Carlton, Lambton Mills	Toronto.
3	F. F. Reeves, Humber Bay	Toronto.
4	C. J. Leaman, Todmorden	Toronto.
5	Tizzard Bros., Humber Bay	Toronto.
6	Robt. Topper, Woodbridge, R.R. 1	Toronto.

DISTRICT No. 3.

1	J. J. Davis, London, R.R. 7	London.
2	R. Sanderson, London, R.R. 7	London.
3	T. Benstead, Strathroy	London.
4	F. G. and C. W. Fuller, London, R.R. 7	London.
5	C. W. Dempsey, Stratford	Stratford.
6	D. A. MacInnes, London	London.

GARDEN COMPETITION.

District No. 1.

Prize.	Name and Address.	Branch.
1	J. Harris & Son, Belleville	Belleville.
2	Cooke Bros., Cataraqui	Kingston.
3	B. Lancaster, Cataraqui	Kingston.
4	I. A. Farquharson, Aylmer, Que.	Ottawa.
5	W. Trick, Ottawa	Ottawa.

District No. 2.

1	C. Aymer, Humber Bay	Toronto.
2	Tizzard Bros., Humber Bay	Toronto.
3	E. W. Fry & Son, Vineland Station	Clinton and Louth.
4	F. F. Reeves, Humber Bay	Toronto.
5	Art Carlton, Lambton Mills	Toronto.

District No. 3.

1	J. J. Davis, London, R.R. 7	London.
2	G. W. Bycroft, London, R.R. 7	London.
3	John Norris, Eagle Place	Brantford.
4	P. W. Jean, London	London.
5	F. Gard & Son, London, R.R. 7	London.

District No. 4.

1	C. A. Wilson, Sarnia, R.R. 3	Blackwell.
2	A. Guthrie, Sarnia, R.R. 3	Blackwell.
3	Geo. Bridger, Sarnia, R.R. 1	Blackwell.
4	W. A. Craig, Sarnia, R.R. 3	Blackwell.
5	Fred. Somes, Sarnia, R.R. 3	Sarnia.

CANADIAN NATIONAL EXHIBITION, TORONTO.

Potatoes:

Prize.	Name and Address.	Branch.
1	T. K. Aymer, Humber Bay	Toronto.
2	W. Trott, London	London.
3	W. J. Downing, Trenton, R.R. 2	Belleville.
4	R. Benstead, Strathroy	London.
5	G. W. Bycroft, London, R.R. 7	London.
6	J. Dandridge, Humber Bay	Toronto.
7	C. Plunkett, Weston, R.R. 2	Toronto.

Tomatoes:

1	C. Aymer, Humber Bay	Toronto.
2	T. Aymer, Humber Bay	Toronto.
3	F. F. Reeves, Humber Bay	Toronto.
4	Jno. McMullen, Cummings Bridge	Ottawa.
5	Wm. Trick, Ottawa	Ottawa.
6	J. Harris & Son, Belleville	Belleville.
7	G. W. Bycroft, London, R.R. 7	London.

Onions:

1	C. Aymer, Humber Bay	Toronto.
2	F. F. Reeves, Humber Bay	Toronto.
3	Tizzard Bros., Humber Bay	Toronto.
4	T. Mulligan, Harbord, Ottawa	Ottawa.
5	Jas. Dandridge, Humber Bay	Toronto.
6	Wm. Trick, Ottawa	Ottawa.
7	Geo. Bridger, Sarnia, R.R. 1	Blackwell.

CELERY:

Prize.	Name and Address.	Branch.
1	J. J. Davis, London, R.R. 7	London.
2	C. E. Post, Brighton, R.R. 4	Odd Member.
3	J. Harris & Son, Belleville	Belleville.
4	A. Bell, Humber Bay	Toronto.
5	R. Sanderson, London, R.R. 7	London.
6	Art Carlton, Lambton Mills	Toronto.
7	C. J. Leaman, Todmorden	Toronto.

WESTERN FAIR, LONDON.

POTATOES:

Prize.	Name and Address.	Branch.
1	W. Trott, London West	London.
2	N. Sanderson, London, R.R. 7	London.
3	R. Benstead, Strathroy	London.
4	Tizzard Bros., Humber Bay	Toronto.
5	T. K. Aymer, Humber Bay	Toronto.
6	W. J. Downing, Trenton, R.R. 2	Belleville.
7	J. J. Davis, London, R.R. 7	London.

TOMATOES:

1	C. Aymer, Humber Bay	Toronto.
2	F. G. and C. W. Fuller, London, R.R. 7	London.
3	Jno. Harris & Son, Belleville	Belleville.
4	T. K. Aymer, Humber Bay	Toronto.
5	Ed. Worgan, Weston, R.R. 1	Toronto.
6	J. J. Davis, London, R.R. 7	London.
7	N. Sanderson, London, R.R. 7	London.

ONIONS:

1	Wm. Trick, Ottawa	Ottawa.
2	C. Aymer, Humber Bay	Toronto.
3	Tizzard Bros., Humber Bay	Toronto.
4	C. Dempsey, Stratford	Stratford.
5	F. F. Reeves, Humber Bay	Toronto.
6	T. Mulligan, Harbord	Ottawa.
7	K. Whitlaw, London, R.R. 7	London.

CELERY:

1	N. Sanderson, London, R.R. 7	London.
2	J. J. Davis, London, R.R. 7	London.
3	Tizzard Bros., Humber Bay	Toronto.
4	R. Benstead, Strathroy	London.
5	J. Harris & Son, Belleville	Belleville.
6	F. F. Reeves, Humber Bay	Toronto.
7	C. E. Post, Brighton, R.R.	Central.

CENTRAL CANADA EXHIBITION, OTTAWA.

POTATOES:

Prize.	Name and Address.	Branch.
1	R. Benstead, Strathroy	London.
2	W. R. Trott, London	London.
3	G. W. Bycroft, London, R.R. 7	London.
4	Geo. Bridger, Sarnia, R.R. 2	Blackwell.
5	T. K. Aymer, Humber Bay	Toronto.
6	J. Dandridge, Humber Bay	Toronto.
7	Tizzard Bros., Humber Bay	Toronto.

TOMATOES:

1	J. Harris & Son, Belleville	Belleville.
2	T. Aymer, Humber Bay	Toronto.
3	W. Trick, Ottawa	Ottawa.
4	C. Aymer, Humber Bay	Toronto.
5	Jas. Cox, Cummings Bridge	Ottawa.
6	F. G. & C. W. Fuller, London	London.
7	F. F. Reeves, Humber Bay	Toronto.

ONIONS:

Prize.	Name and Address.	Branch.
1	Wm. Trick, Ottawa	Ottawa.
2	C. Aymer, Humber Bay	Toronto.
3	Jas. Dandridge, Humber Bay	Toronto.
4	F. F. Reeves, Humber Bay	Toronto.
5	Tizzard Bros., Humber Bay	Toronto.
6	Jno. Norris, Eagle Place	Brantford.
7	C. W. Dempsey, Stratford	Stratford.

CELERY:

1	F. F. Reeves, Humber Bay	Toronto.
2	J. Harris & Son, Belleville	Belleville.
3	J. J. Davis, London, R.R. 7	London.
4	Wm. Trick, Ottawa	Ottawa.
5	C. E. Post, Brighton	Central.
6	Tizzard Bros., Humber Bay	Toronto.
7	A. Bell, Humber Bay	Toronto.

Owing to the war conditions in the countries of Europe from which we have been accustomed to get different varieties of vegetable seed, it has been found necessary to endeavor to overcome the resulting shortage by encouraging home grown seed in Canada. The different Federal and Provincial Government officials are taking this matter up, and the Federal Government have established headquarters at Ottawa for this work. It is considered that the required seed can be grown to good advantage in this country and our own seed placed on the market here in Ontario for the use of our own growers.

Our members know, none better, what this awful testing war time has meant to them, for many of their gallant sons at the call of their country shouldered their arms and marched to Flanders' fields and foremost fighting fell. I am sure you will all join with me in expressing our heartfelt sympathy in the irreparable loss sustained by our officers and members in the desperate struggle of our Empire and our Allies to crush the murderous Hun. Our esteemed ex-President, Mr. Frank Reeves, and Messrs. Tizzard and Dempsey have vacant chairs at their firesides which will never again be filled. These young men were, as their fathers are, members of our Association. They have fought the good fight and fell with their faces to the foe. All honor to their memory.

In Flanders fields the poppies grow
Between the crosses, row on row,
That mark our place; and in the sky
The larks still bravely singing, fly,
Scarce heard among the guns below.

We are the dead. Short days ago
We lived, felt dawn, saw sunsets glow,
Loved and were loved; and now we lie
In Flanders fields.

A MEMBER: In connection with the percentages allowed on the score card, some difference should be made in the score for clean and neat outbuildings and yard, between farmers and market gardeners, as the farmer with his stock yards, straw stacks and manure pile, which were all necessary, was at a disadvantage.

J. LOCKIE WILSON: The delegates ought to have the privilege to state their opinion as to what these scores should be, and I incorporated this into my address for the purpose of giving them an opportunity to do this. If their suggestions are feasible I am quite sure the Board would be open to accept them.

PROF. MACOUN, of Ottawa, here suggested that a number of the score cards be printed and discussed in the evening in connection with his paper on "Garden Competition."

J. J. Davis: I have found in judging that a man will take fairly good care of his crops in the field, but he will have high weeds around his buildings and house. This spoils the effect of the place. If a man's field and garden and growing crops are kept fairly clean, and the buildings are allowed to present an untidy appearance, you can't possibly call it a well kept place.

Members of the O.V.G.A. who have made the supreme sacrifice.

J. D. Dempsey, Stratford.

T. A. Reeves, Humber Bay. W. G. Tizzard, Humber Bay.

The Member: I did not refer to weeds. It is the manure pile, straw stacks, etc., I had reference to.

J. J. Davis: I don't think any judge would count that against the farmer.

REPORT OF THE VEGETABLE SPECIALIST FOR THE YEAR 1917.

S. C. Johnston, Toronto.

Work among vegetable growers of the Province of Ontario during the past year has been carried on along lines very similar to those given in the report of the year 1916. More or less success has attended our efforts and we are glad to be able to report that apparently the work which has been carried on by the Vegetable Specialist during the past three years has proved of value. The services of Mr. G. O. Madden, B.S.A., have been secured to carry on considerable research work which we have found necessary in order to further our demonstrational work on market gardens of the Province. He has done research and investigational work which we have great hopes will prove more beneficial to the vegetable growers than much of the work which we have already done. I might state that the vegetable growers of the Province have had in most cases a very satisfactory season, crops have been uniformly good and prices have given them fair returns for their labor. As far as I am able to ascertain, the vacant lot and backyard garden campaign, conducted over the Province, has had very little effect on the commercial vegetable growers, and some have intimated to me that the campaign resulted in their favor, as it created a larger demand for vegetables than had been found in previous seasons. The vegetable growers of the Province adjusted their planting to allow much of the early green vegetables to be grown by the vacant lot gardeners and planted their land with crops of a more staple nature.

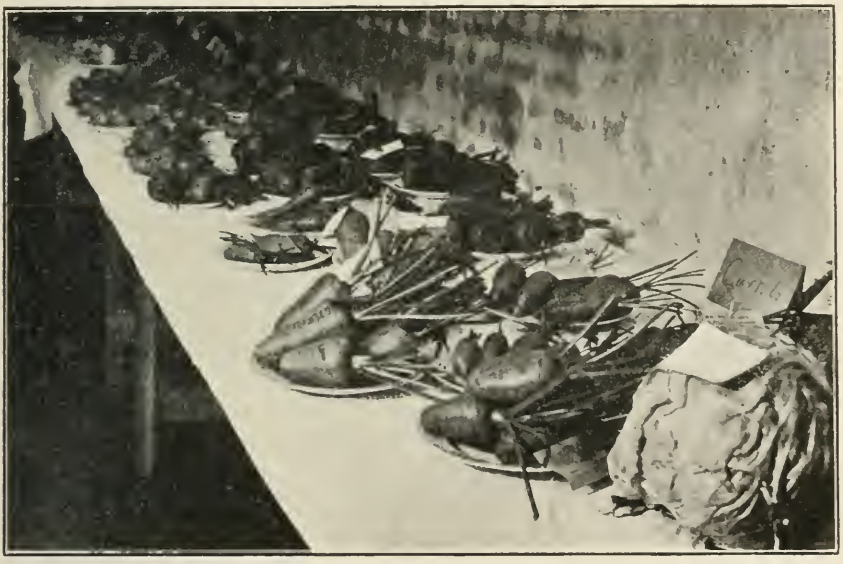
I am informed that the seed situation for the coming season is satisfactory so far as the commercial vegetable growers of the Province are concerned. Following is a report of the various phases of vegetable work which have been carried on during the past season:—

Vegetable Growers' Conferences.—Conferences were held with considerable success in thirteen places, being four more than in 1916. Afternoon and evening sessions of one day were held at Toronto, Hamilton, London, Union, Brantford, Stratford, Tecumseh, Vineland, Welland, Burlington, Picton, Kingston and Ottawa. The speakers were practical growers and their talks were simple explanations of the methods they have followed in producing first class crops at a reasonable cost and marketing them for the highest prices. These meetings were well attended and the growers considered them to be of considerable value to them. At the evening sessions they were given an opportunity of viewing some motion picture films which were prepared during the past season illustrating the most up-to-date methods of greenhouse lettuce and tomato growing, growing onions, as well as the winter storage of cauliflower.

Cabbage Root Maggot Control.—Further demonstrational work of the use of corrosive sublimate as a control of the cabbage root maggot has been carried on in the following places: Fonthill, St. Catharines, Brantford, Simcoe, London and Leamington. Over 6,000 plants were treated—four applications, one week apart, commencing May 15. Again I am unable to report that the use of this material gave results similar to those reported in 1915, and again I have reason to lay this fact to the cool wet season which occurred during the egg laying period and as a result practically no maggots were found and very few eggs were seen in any of our experimental efforts. Work which was carried on with a later crop of cabbage during hot dry weather resulted in practically an absolute control of the maggot, and in this case eggs were plentiful. I have reason to believe that our first experiments

conducted in 1914 were along the right line and that this material will eventually be of benefit to the cabbage and cauliflower growers of the Province. Many vegetable growers have written to this office asking for directions how to use corrosive sublimate and from various sources I have learned that the use of this material is spreading quite rapidly over the Province.

Onion Blight.—Further experimental work was carried on in the Cataraqui district attempting to control onion blight. This is the third season we have used Bordeaux mixture, with and without stickers, once a week and oftener before and after the blight appeared on the leaves. At one time in the season it appeared that the Bordeaux mixture was doing some good, but in less than a week's time the whole patch was blighted evenly over treated and untreated rows. We have come to the conclusion that Bordeaux is of little or no use as a control for onion blight, and we hope to carry on experimental work along an entirely different line during the coming season, as we consider it will be very necessary to be in a position to



Vegetables grown by amateurs.

give some definite remedy for this disease which, during the last three or four years, has spread rapidly over many sections of the Province. We hope to use strong sulphuric acid at the rate of one part to 1,000 parts of water, or 2 ozs. to fifteen gallons of water and also a solution of formalin (forty per cent.) used at the rate of one-half pint to two and one-half gallons of water. These have been tried out to some extent already this season, but, owing to unforeseen conditions, a definite result was not secured and it is hoped that during the coming season more detailed information with regard to this solution will be available.

Black Heart of Celery.—Vegetable growers in many sections of the Province have had very serious losses from a disease commonly known as Black Heart of Celery, and so far very limited information is available as to means of control for this disease. In co-operation with Mr. W. J. Cooke, of Cataraqui, we have carried on experimental work for two seasons and have reason to believe that a solution of one-half pint of Black Leaf forty combined with forty gallons of Bor-

deaux mixture will control the tarnished plant bug which, we believe, is responsible for the first injury of the tender leaf shoot which, upon decaying, allows certain bacterial diseases to enter the plant and cause a rapid decomposition of the heart of the plant. This solution when mixed with Bordeaux and applied once a week during the regular sprayings for celery blight has practically controlled both blight and black heart. While we are not in a position to state definitely that we have a remedy for black heart in celery, we have every hopes that after another season's work with this solution we can carry this remedy into many parts of the Province and demonstrate its use and thus prevent considerable loss to celery growers.

Dust Mixtures.—In my report last year some mention was made of experimental work with regard to the use of dust mixtures in the prevention of fungus diseases and insect pests on vegetable crops. This year dust mixtures were used on a larger scale as follows:—

Lime sulphur dust and arsenate of lead in dust form were used on potatoes for the control of late blight and potato beetles. The dust was applied on seventy rows of potatoes, each row being forty rods long. We cannot state definitely that the blight was controlled in the district where this experiment was carried on as very little blight was seen this summer, but the potatoes from the dusted rows were cleaner, larger and, as a result, the grower had a larger yield per acre, and no other reason can be given for this than that the dust had some effect on the growth of the vine which enabled it to produce tubers of extra large size. Our work in the control of the potato beetle was more successful and it was found that if the dust was applied to the plant either before or while the beetles were small they could be controlled with very little trouble, one application of dust a week being sufficient. The dust used for this purpose was composed of eighty-five per cent. sulphur and fifteen per cent arsenate of lead, which cost about $8.00 per 100 pounds. One hundred pounds of this mixture was found sufficient to cover eight acres of potatoes. The value of dusting operations as compared to liquid spraying is largely the ease in applying the dust, the saving of time and labor, with possibly a saving of cost of material. A power duster was used by Mr. Thos. Delworth, of Weston, who dusted a patch of two acres of celery commencing in July and, continuing for twelve weeks, in all about 200 pounds of dust were used. At this rate eight pounds of dust were used for one acre of celery at one application. The material used for dusting celery was composed of ninety per cent. sulphur and ten per cent. filler, and cost $4.50 a hundred pounds. The results indicate that in dust mixtures we have found a material which may be easily applied and which will give satisfactory results at a comparatively low cost. Further work on this material during the coming season, we hope, will give us some indication as to the relative cost between dust mixtures and liquid sprays on other vegetable crops. At the present time we feel justified in recommending the use of dust mixtures in the control of celery blight.

Onion Maggot.—Vegetable growers in many sections of the Province have complained of trouble in controlling the onion maggot and an attempt was made during the past season to control this maggot by using one pound of hellebore powder mixed in forty gallons of water. This solution was sprayed along the base of the onions with a watering can with the rose attached. Check rows in the infested parts of the patch were unsprayed and applications on the experimental plot were made once a week for three weeks. Our results, however, were negative owing again to other factors exerting some influence in lessening the attack of the

maggot. Further work next year with other materials will, we hope, give us results of a very useful nature.

Celery Blight.—No new demonstrational patches of celery were secured this year for the purpose of demonstrating the use of Bordeaux mixture as a preventive of celery blight. Visits were made to those growers with whom we had worked in previous seasons and it was found that these growers were continuing the spraying of celery and that in quite a number of cases several celery growers in their vicinity had adopted this method of preventing any serious loss through celery blight. Experiments were also conducted with the use of formalin at the rate of one-quarter pint of formalin in two and one-half gallons of water. This mixture was applied after the blight had appeared and we considered it advisable to secure, if possible, any means of combatting the disease of infecting patches. The formalin treatment from our experiments this season is not a satisfactory means of controlling blight once it has started on a celery patch.

Experiments have also been commenced in connection with soil treatment which really amounts to a partial sterilization of the soil as recommended by some of the leading authorities. Various chemicals are being used in the hope that some method will be found of controlling diseases by attempting to keep the soil in a perfectly healthy condition rather than having it unbalanced. These experiments are being carried on in various greenhouses in the Province and during the coming season it is hoped to continue them in cold frames, hot beds and on small plots of some vegetable garden.

Vegetable Garden Survey.—In order to secure reliable information regarding the extent of the vegetable industry in Ontario, a survey was commenced for the purpose of recording in localities where vegetables were grown, the number of acres of each vegetable, the estimated quantity grown per acre, the cost of production and the value per acre of the crops. The work was carried on by Mr. F. F. Reeves, of Humber Bay, who has visited many of the sections but has not as yet completed the survey, and I do not deem it advisable to make any detailed report of this work until Mr. Reeves has had sufficient time to make up a full statement based on records taken in all parts of the Province.

Prof. Macoun: What formula do you recommend for corrosive sublimate?

S. C. Johnston: Dissolve four ounces in forty gallons of water.

A Member: Is there any onion blight in the Niagara District?

S. C. Johnston: I have seen it in the Niagara District, although not as bad as in Brantford.

PROGRESS OF THE SURVEY OF ONTARIO VEGETABLE GROWING.

F. F. Reeves, Humber Bay.

During the past season the Department of Agriculture requested me to make a survey of the vegetable garden industry of the Province of Ontario with the objects in view of securing reliable data as to the extent and value of the vegetable industry in the Province and, if possible, secure such information as would be of value in any work that might be carried on with regard to giving assistance to returned soldiers or sailors who might desire to engage in the growing of vegetables as a business. It was also desired to secure information as to available tracts of land in the various vegetable growing sections of the Province which could be utilized, should it be necessary, for veterans' vegetable gardens. The questions

which the Department of Agriculture were most desirous of having specific data on were the number of acres of land in the Province devoted to the production of vegetables, the average number of acres that each man cultivated, its approximate value, the value of implements considered necessary for the efficient handling of the garden, the accessibility of manure and the amounts per acre that were annually used and also the quantities of commercial fertilizers. It was also thought necessary to ascertain definitely the number of employees on certain sized gardens and the length of time these employees were used. The methods employed in marketing the vegetable crops and the distance of the gardens from the market was considered almost as important as the quantity of each of the common vegetables grown per acre and the cost of production. I have been able to visit over 760 commercial vegetable growers in the Province, but owing to circumstances over which I have no control, this work is as yet unfinished, and until the whole Province can be fully covered it does not seem advisable to make any definite statements as to the results of the survey. Your executive, however, have seen fit to ask for some information as to how this survey was carried on and to give some short notes on some of the most important features of the vegetable work which have been brought to my attention while engaged on this work, and I have prepared a few of the most important impressions, which I gathered and simply present them to you as my own impressions, and do not wish any to prejudice any of the conclusions which may be arrived at by the Department of Agriculture when this vegetable survey is completed.

Short forms with spaces for written answers of questions which were considered necessary were used in this work, and by personally seeing the vegetable grower, or some one in authority on his garden, reliable answers to the questions were secured. I must acknowledge the co-operation of the many vegetable growers visited during the past season who very kindly devoted a portion of their time to answering these questions and giving me what information they had available with regard to their own farms, as well as land available in the districts. With practically no exception I was received in a kindly manner, and in so far as it was possible for the vegetable grower to answer the questions asked him, I found that he was only too glad to do so, and many expressed the opinion that if they possessed any information which could be made available to any veteran in this war they considered that it was their duty to give what could be relied on in order that the soldier contemplating taking up gardening as a business would not be led astray by mythical results claimed by some unscrupulous growers or others who might possibly attempt to profit through his lack of knowledge of the vegetable growing business. With reference to some of the impressions which I gathered while on this work: From my experience both as a commercial vegetable grower and while engaged in this survey work, there are not one per cent of the vegetable growers in the Province of Ontario who can give any definite data as to how much it costs to produce a given area of any vegetable. Heretofore it has been considered unnecessary to take this important matter into consideration and, from my experience on this survey work, I am inclined to believe that the sooner the vegetable grower in the Province of Ontario commences to keep some record of the cost of his operations and of the returns from a few, at least, of his crops, the sooner will he be in a position to eliminate those crops which demand considerable labor and attention, but which, when carefully considered, give too little monetary return. I am not expressing any idea that a complete bookkeeping system should be inaugurated on the vegetable gardens of the Province which would entail much

labor and be a constant source of worry, but I do say that my own impression is that the vegetable grower must introduce more business methods into the growing and marketing of his products before we can hope to consider that the business of vegetable growing is one to which men may turn in the hope of making more than a bare living.

Secondly, I am of the impression that there are districts in the Province in which a larger acreage could be devoted to the cultivation and growth of one or more vegetables and as a result make several districts in the Province well known to the trade as the largest available source for certain vegetable commodities. It is my opinion that where ten or fifteen, or even more, growers are engaged in growing the same crop new methods will be introduced more readily, labor can be secured more easily as the labor shortage can be overcome by shifting gangs from

Cow peas sown in asparagus to be disced in as green manure.

one place to another, supplies can be purchased at a more reasonable rate by several of the growers joining in orders, and a saving can be effected in machinery necessary to grow and harvest some of these crops, and further, where a specialty is made of one, two or more crops, it has been found that the marketing facilities are infinitely better, that the growers have a closer relationship with the dealers, and, as a result, their commodities are sold to a better advantage than in sections where several growers grow all of the fifty or more vegetables common in this Province, and as a result are competing, one with the other, to the detriment of all. I do not believe that it is possible for market gardeners in the vicinity of any of our large cities to carry this into effect, as their business depends largely on the fact that they are able to supply each and every vegetable to their customer as it is demanded, but my remarks refer to conditions that are bound to come within the next twenty-five years in this Province of Ontario, and it is only by giving such

matters careful consideration and forethought that policies may be defined and advice given whereby the least amount of effort will produce a maximum amount of result.

Thirdly, I believe that the vegetable growers of the Province of Ontario must turn more and more to our scientific investigators, and make use of the information which is given them, free of charge, by the Departments of Government who are employed to secure this information for the benefit of the food-producing members of the rural communities. I have found quite a number of vegetable growers who are not making use of Government information, and their crops are troubled with various insects and diseases which cause them severe loss, possibly not each year, but from time to time during their gardening experience. Some of them expressed surprise when I informed them that other growers in the Province of Ontario were controlling these conditions satisfactorily at a very low cost and with comparatively little labor, owing to investigational work carried on by various branches of the Department of Agriculture. In a Province organized so well as we are led to believe the Province of Ontario is, this state of affairs should not be, and I am sure that if the Department of Agriculture could see fit to come in closer touch with the vegetable growers of the Province, and give them such help as they require in helping to produce vegetable products which we are led to believe are of such importance in the saving of meat and wheat products as food, the latter would materially increase the production of vegetables, and do their utmost to supply vegetables of excellent quality which will be so necessary for the next few years.

In conclusion I beg to state that I consider the information which has been gathered, and which, no doubt, will be completed during the next season, is of inestimable value, not only to the Department of Agriculture, but to the vegetable growers in general, as anything which will help to overcome poor conditions in the Province and tend to aid in the production of better vegetables will be of advantage to the community at large.

The Chairman here read to the Convention a telegram from the Food Controller, as follows: "Would like to have Vegetable Growers at Convention endorse campaign for increased consumption of carrots and onions to prevent waste and save exportable food." remarking that the two mentioned were two of the important vegetable crops, being the most staple.

E. K. Purdy, Kingston: I think he would have to look up the onions first. At our Directors' meeting, it was found the growers had nothing in their hands after the buyers have bought from the cold storage. I don't see that we should endorse them very much. The onion growers have none in their hands, and in our city last winter they had a couple of carloads of Bermuda onions, and they held them all summer.

R. Dengate, London: Three weeks ago I was up at Jeannette's Creek; I believe there were 2,500 pounds of onions up there at that time. I believe any one wanting onions can get them there.

E. K. Purdy: That brings it along to the point that I have been advocating in this Association ever since I belonged to it, that we should have some means of publicity, where these products are. It is one of the things most important to the grower, so that if we are short in one section we can get them from another.

Mr. Dengate: With regard to carrots, we can supply 1,000 or 2,000 bushels of them in London. I believe this thing could be overcome by the local secretaries taking a survey of the crop and sending in the report to Mr. Wilson, and anyone

wanting vegetables could just send to Mr. Wilson and find out where this crop is. At Jeannette's Creek they grow onions as their principal crop, and if the secretary of the branch would send word to Mr. Wilson, then these big buyers in the cities could find out where they are and it would help us as growers to sell the surplus stock.

J. J. Davis: I see no reason why we could not make a start at getting some report on the crops and issue monthly information. It is in the interests of Canadian growers to get their onions before the people and get them sold. It is not very long now before we will start growing next season's crop, and besides there is the food value.

Mr. Hellerman, Waterford: In this matter you are getting very near to a good point on which I am going to talk a little later, in connection with the Vegetable Growers' Association of America, and show in as few words as possible what the Government in the United States has done in one locality in that respect.

Even potato crop.

Mr. Martin, Vineland: I believe if the Government, through the District representatives in each Province, will use the method similar to some of the other farmers' seeds and requirements, such as potatoes, spring wheat and several things, the farmers wanting that will report to the District Representative, and he to the Government. I made use of this myself in getting some seed from Muskoka.

F. F. Reeves: I saw a report the other day that the growers near Toronto had some 20,000 to 25,000 bushels of onions or carrots. I doubt very much if you could pick up a carload of onions among the growers. You might among the commission men. So far as carrots are concerned, I don't count on carrots as a commercial gardener's production. They are grown in very large quantities by farmers. I don't think that the average commercial gardener or vegetable grower would grow as much as a quarter of an acre of carrots, because as a general rule the gardener only grows carrots for bunching, so that I don't think the carrot question affects us very much.

J. J. Davis: The fact remains that there are large stocks of carrots throughout the country, and more than are likely to be used, unless we make a special

effort to induce the public to eat more carrots. At this time we ought not to let any food go to waste if we can possibly avoid it.

Prof. Macoun: Could this Association pass a resolution to do what it can to get people to eat more onions and carrots for the rest of the winter? It seems to me that it would have a good deal of influence with the people if it came from the Vegetable Growers Association. The Food Controller has asked us to do that.

Mr. Hellerman: Just to maintain this point, I will make a few more remarks along the line which I intended to later. It is a matter of advertising in a judicious manner. Some time ago there was a surplus of spinach in Rhode Island. The U. S. Government sent a man to Providence, R.I., paying one-half of his salary, the Providence market gardeners paying the other half. This man had to be on the job before five o'clock in the morning. But he inserted in the Providence papers an advertisement: "Now is the time to buy spinach." They had an overabundance of spinach, and the consequence was that they disposed of their surplus of the spinach grown in that part, and paid their half of the Government representative out of the spinach crop.

J. J. Davis: It is evident that it is to our interest to get busy and institute an information bureau regarding crops.

Mr. Dengate: There is one thing about market gardeners that I think we have to remember. A year ago carrots sold for about $1.50 a bushel. Everybody this spring grew carrots. Now we can hardly give them away. An old man once told me, "When everybody runs, you walk," and I think it is the greatest lesson we can learn. You take cabbage: when they are selling for $1.50 a dozen, everybody the next year jumps to the cabbage. If we would learn to grow about the same amount of crop each year we would not have these heavy surplus crops.

Moved by Mr. Hellerman, seconded by Mr. Purdy: "In view of the fact that onions and carrots are two of the best foods, and large quantities of these may go to waste before spring, resolved that this Association urge the people of Ontario to eat more onions and carrots until the next crop is produced."

F. F. Reeves: I can quite endorse that motion, although there are some things that come from the Food Controller's office that I would not endorse as heartily as that. Anything that will help along consumption of vegetables I am in favor of. But when you see an article in the papers purporting to come from the Food Controller's office asking the vegetable gardeners and commercial growers to grow wheat and white beans on land that they are paying anywhere from $30 to $50 an acre rent for you think there must be something wrong. I had not the slightest idea who did it. I got a whole lot of bumps in going around last year. Growers would say, "You want to know what we are doing," and then some one else steps in and says we ought to get busy and produce wheat. Anybody who knows anything about market gardening knows about the kind of wheat we would grow on market garden land. You would have nothing but straw. As to beans, if you would travel around after the snow was off the ground, you would find them still there.

Mr. G. R. Hastings, Food Controller's Office: As this telegram is addressed to me, I would like to say a few words. This is a wire from our present Food Controller, and I imagine was sent out at the instance of the Fruit and Vegetable Committee of that Association. I know something about the numerous requests we have had from the Vegetable Growers of Ontario with reference to the surplus of carrots. It appears, however, there are not so many carrots around the Toronto district as in some other places, but there is an immense amount of carrots around

some other sections. We have in the records no less than fifty carloads of onions that are liable to go to waste, unless taken care of. These are reports that come into the Food Controller's office. The Food Controller has supplied three tons of hard coal to a concern for the sake of taking care of onions that would otherwise have gone to waste. The Food Controller asks you to endorse the campaign that is now conducted by the Food Controller's office. I saw a wire from across the water within a week in reply to one that was sent from the Food Control office, that the War Purchase Department of the British Government is not able to take any more dried vegetables from this country. It seems it is impossible for several reasons. We are endeavoring to try and induce the housewives of Toronto and other centres to buy more carrots and onions than they were in the habit of doing. All that the Food Controller asks in that wire is that you endorse that campaign. The reports come from growers, not dealers or cold storage men. I have been connected with the Fruit and Vegetable Committee since it was organized, and have many times been surprised to see some of the notices that appear in the press with reference to the work of the Food Controller's office. I read in a prominent Western Ontario paper a few days ago that drastic regulations and revolutionary methods were shortly to be announced from the Food Controller's office. There is nothing of that kind contemplated by the Food Controller's office. And that is only one of many reports that I have seen in the press which were never issued officially or unofficially from the Food Controller's office. I think the Food Controller is doing a lot of good for us.

The resolution moved by Mr. Hellerman, and seconded by Mr. Purdy, was here unanimously carried by the meeting.

INSECTICIDES AND FUNGICIDES.

L. Caesar, O. A. C., Guelph.

At a conference on the subject of insecticides and fungicides held in Toronto before Christmas at which your Secretary, Mr. Lockie Wilson, was present, I was appointed to bring the matter of these substances before the Vegetable Growers' Association.

There is considerable anxiety lest when the time comes to use poisons and fungicides on plants these substances may not be readily available. It was, therefore, thought wise to ask each member of the Vegetable Growers' Association to take the precaution of interviewing as soon as possible the local merchant or whoever supplies the community with these materials and urge him to send in his order at once that there may be no delay. It would be a great pity, for example, to see the potato crop ruined or the tomato or cabbage crop devoured by cutworms or other insects simply because there was no poison to prevent it. In many cases where vegetable growers live near each other they will secure their materials at lower prices than I am mentioning by clubbing together and buying in large quantities, but in other cases this co-operation cannot be practised for various reasons.

Insecticides.

I shall now discuss for a few minutes the various poisons on the market, mentioning their comparative merits and the prices that are likely to prevail this year for them.

Paris Green.—This poison, which is the vegetable grower's favorite against most biting insects, is available in considerable quantities, though there are indications that the supply will not be sufficient for the demand. It is even dearer than last year. The latest quotations I received were that for one pound packets put up in a 100-pound case it will cost from about 60c. to 65c. a pound f.o.b. This

Cutting seed potatoes previous to treatment with formalin.

means that the man who is buying only four or five pounds will probably pay from 70c. to 75c. a pound. Paris green contains a little over 50 per cent. of arsenious acid and is the strongest and quickest of all our common insecticides for biting insects. Used alone as a dust or with water it is likely to injure any but the most resistant types of foliage. It has also the defect of being washed off by rain too

easily. Wherever possible it should be used with Bordeaux or with milk of lime made by slaking either fresh stone lime or hydrated lime.

Arsenate of Lead.—Arsenate of lead, our next most common insecticide, will so far as I can discover probably be available in sufficient quantities to meet the demand. It will be sold both as a powder and a paste. The powder is just twice as strong as the paste and is apparently just as good. It has the advantage of being cheaper to ship and of causing no trouble by freezing or evaporation, and it is also slightly easier to mix before being put into the spray tank. Its powder form makes it possible to use it as a dust, which is another convenience.

The price of arsenate of lead has increased much since last year and in quantities of at least 100-lb. drums will cost between 20c. and 25c. per pound for the paste and 40c. to 48c. per pound for the powder. Large associations may of course get this or any other substance a little cheaper than the lowest figures I mention. Arsenate of lead is not nearly so quick killing or so strong a solution as Paris green, partly because it does not contain nearly so high a percentage of arsenious acid. The paste form contains about 14 per cent. of this and the powder about 30 per cent., so that it requires nearly four pounds of arsenate of lead paste or about two pounds of the powder to equal one pound of Paris green.

Arsenate of lead, however, has two great advantages over Paris green, namely, that it is a much safer poison for plants (being in fact the safest poison we have either when dusted or sprayed on plants), and that it adheres to foliage in wet weather much better than Paris green. It adheres also better than any other poison known. About two pounds of arsenate of lead paste or one pound of the powder added to one pound of Paris green makes an excellent combination for destroying potato beetles.

Arsenate of Lime.—Also called arsenate of calcium or calcium arsenate, is a comparatively new poison commercially, but will likely be much used this year. It is sold both as a paste and a powder, but chiefly as a powder. It is white and looks very like arsenate of lead. Pound for pound it is about one-fifth stronger in arsenious acid than arsenate of lead, the paste containing about 17½ per cent. arsenious acid on an average and the powder about 35 per cent. It is also cheaper than arsenate of lead, usually being about two-thirds the cost of this material, the paste form selling at from about 14c. to 18c. a pound and the powder from 28c. to 34c. As a rule the powder will be more convenient to use and as in the case of arsenate of lead is much more satisfactory to store and to ship. Though arsenate of lime adheres to the foliage better than Paris green, it does not adhere so well as arsenate of lead. About one and one-half pounds of the powder should be nearly equal to one pound of Paris green, though it will not kill quite so quickly as the Paris green will. Arsenate of lime is quite safe to use with Bordeaux mixture, but if it is used with water alone there should be added about six pounds of freshly slaked stone lime or eight pounds of hydrated lime to every forty gallons of water to prevent burning. The hydrated lime, of course, must have been kept in paper bags or protected from the air, otherwise it loses its strength.

Sodium Arsenate and Sodium Arsenite.—In the State of Maine sodium arsenate and also sodium arsenite, often sold under special popular names, are much used as poisons on potatoes. The State of Maine as you know is a great potato growing state, one of the greatest across the border. The reason for using these substances is that they are very much cheaper than either Paris green, arsenate of lead or arsenate of lime, and are about twice as strong even as Paris green. They cannot of course be used alone or even with lime on foliage, but are quite safe

with Bordeaux mixture, and Bordeaux mixture should always, if possible, be used on potatoes because of its invigorating effect and because of its power to ward off disease.

These poisons when purchased are in the form of a powder and are dissolved with boiling water. Sodium arsenite can be made at home quite simply, but only in the liquid form. The method is to boil together one pound of white arsenic and one pound of sal soda in one gallon of water, stirring until all the arsenic is dissolved. This usually takes about ten or fifteen minutes. Then any water that has evaporated may be made up for by adding more. This gallon of poison will now contain practically twice as much arsenious acid as would be found in one pound of Paris green, so that where one pound of Paris green would be used half a gallon of this would act as a substitute. I may mention again that it is not at all safe except with Bordeaux mixture.

Tobacco Extracts.—Nicotine sulphate 40 per cent. both under this name and under the name of Black Leaf 40 can be purchased this year at about the same price as usual namely, $2.50 per two pound can. The directions for use are given on the can. This substance should never be left exposed to the air because it volatilizes. Tobacco extract is of course one of the best and safest remedies for plant lice on any tender or moderately tender foliage where soap washes would be dangerous. As to tobacco punk, which is used so much for fumigating greenhouses, I have not made any enquiries, but have no doubt it can be secured quite readily by anyone who needs it.

Fungicides.

Bluestone.—Bluestone is, of course, used chiefly in connection with the making of Bordeaux mixture, our chief fungicide for vegetables. I think the price of bluestone (copper sulphate) this year will be about the same as last, and will be between 14c. and 20c. a pound except where large quantities are purchased wholesale. Stone lime, I fear, will often be hard to secure this year, but hydrated lime may be used as a substitute, provided, as I have said above, that it be kept covered from the air. It should always be used in about one-quarter greater quantities by weight than the stone lime, because the latter is about that much stronger.

Lime-sulphur.—This mixture, if required, can be obtained from the manufacturers, but will cost at least $1 a barrel more than last year. It is not nearly so good a fungicide for most vegetables as Bordeaux, and should seldom be used on these plants.

Formalin.—This fungicide is used chiefly in the case of vegetable growers to destroy the spores of scab on potatoes, or in some cases to disinfect soil in greenhouses when affected with fungi.

From inquiries it is likely to be easily secured and to cost about the same as last year, namely, one-pint bottles selling as a rule for 40c.

In conclusion, I shall be pleased to answer as far as I can any questions relating to insecticides and fungicides or that naturally arise from their association with these substances.

Prof. Macoun: We have used Paris green mixed with arsenate of lead at Ottawa for a number of years. It is better than either alone. You get the quick action. You know with Paris green the trouble is that if a rain comes it washes it all off. We have been using half a pound Paris green and one and one-half arsenate of lead paste to forty gallons of water. We find it works out very well.

J. J. Davis: I use three pounds arsenate of lead to half a pound of Paris green.

UPLIFT OF THE AMERICAN VEGETABLE GROWERS' CONVENTION.

G. B. Hellerman, Waterford.

It seems to-day that the topic on which I am to speak should rather be "The Echo" of the Vegetable Growers' Association of America than "The Uplift," because we are already receiving the uplift of the Ontario Vegetable Growers' Association this morning. However, the opportunity for betterment of oneself, a chance to obtain information that will benefit the mental and moral make-up of one's self should be taken advantage of. Such seems to be the idea or view taken when we gather together and discuss and listen. Here is where we get the material that makes the larger self.

The Vegetable Growers' Association of America and of Canada, or the Vegetable Growers' Association of the United States, is the Vegetable Growers' Association of America. We are one. A by-law of that Association speaks of a province and state, and I notice that the President of the National Association has appointed just recently Mr. Delworth to the Executive Board, whose term will expire December 1, 1920. I had the pleasure of attending their Convention.

The influence of a national body is of great importance as well as of great value, originating within the local Associations and going on up through the regular channels into a Provincial or State Association, and on up through the regular channels into the National Association, which makes it of very great importance, because the men who have charge of this work in the National Association have a wonderful work to perform, because they must build up great ideas, which will carry weight.

The President of the American Association called the attention of the members and the visitors there assembled to the power that is obtained by being allied with the national body to carry movements through and have them put in operation, which is very great.

If the Vegetable Growers' Association of America is going to reach the number of growers that it should, something tangible in the way of benefits must be offered, and these men who have charge of this National Association must work out these problems and condense them and bring them down into a small practical condition, and present them so that they may be a force to carry on the work. It is well, therefore, that local communities organize if they expect outside assistance. The progressive sections in which gardening is carried on are those who are connected with and have felt the influence of the national body. It is proven to be true in more ways than one.

Prof. Sidney B. Haskell spoke in reference to "Growing Vegetables Without Manure Commercially—Can It Be Done?" After discussion, the final answer was for all truckers and cannery growers is definitely yes. "For market gardeners," he said, "I can only answer yes, but only when sufficient water is available to render moisture easy and practicable."

Mr. George A. Scott, the New England manager of the Florida Citrus Exchange, spoke on the auction system of marketing. Three distinct benefits accrued from auction sales, namely, the dealer knows accurately the demands of the consuming public. The necessary co-operation brings about improved produce and grading, and protection of the shipper is insured through representation. The fact was emphasized that honesty is the grower's most valuable asset, that the day is past when the grower would pack the best specimens on top and the inferior specimens in the bottom, making up the bigger portion of the package.

There was an address by Dr. Carter on the Nation's Food Supply. We have heard much about food supply, conservation of food, etc., so that you probably know all about that, but he made one remark in reference to the war, that he hoped the United States would stay in the war until the Island of St. Helena is again decorated with the would-be world conqueror.

Seedsmen advised the market gardeners to grow all the seed they could and conserve all that they possibly could for the next few years to come.

Motor truck efficiency was spoken of. It was discussed and analyzed in every respect and compared with the horse power, and in connection with the motor truck, to compare properly the efficiency and the cost of the motor truck good roads are needed. It makes quite a difference if we have good roads for motor truck transportation or if we do not.

We had an address from Mr. MacLennan, of Guelph, in reference to the development of "Self-Blanching Celery."

Barrels for formalin.

And in connection with the Association meeting there was an exposition of vegetables. I never saw finer vegetables as a whole than in that exposition. These were selections, and were packed as for the market.

I come from Philadelphia, and many years ago when I came to Toronto I remember making the remark that I never saw finer vegetables grown anywhere than here, when not specially cared for. Some four years ago I finally landed in Canada and became a Canadian.

All these Conventions are helpful. Meeting each other is helpful. I don't know what some people think of farmers, but I have found some of the best men among farmers and among the market gardeners. There is just as kind a hand-clasp as in any other meeting in a Convention such as this.

Regarding co-operation and working together in these great movements. It was mentioned here that a party obtained coal for a certain specific purpose. The greenhouse growers who are members of the Vegetable Growers' Association of America, on account of their association and their co-operation, have been successful, as you know, in obtaining coal under certain conditions from the Food Controller at Washington. He was very loath, I understand, to release any coal, but

at last consented to release the coal under certain conditions. For the sake of preserving and growing of plants that would be used for the spring crop he would allow a certain percentage of coal to be released for that purpose, but he considered to a great extent that the growing of vegetables under glass was somewhat of a luxury, and I rather think that we would agree to some extent with that decision. But the point I wish to make is, that association creates the power to obtain these results; so let us to-day make up our minds to the fact that by meeting with one another, by consulting with one another, by listening to the valuable papers that have been read and will be read, and the valuable subjects which will be presented, we will be stronger and better men when we go home from this Association here. Yesterday I spent the day with the Fruit Growers' Association, and I was very much interested in seeing the little gatherings around the room after the meeting. There would be two or three here, three or four there, and over here another group, busy comparing notes. I obtained some information along the line that I wanted, in the line of bookkeeping in connection with Association work, and I am better equipped along those lines than I was yesterday morning when I came to Toronto. So it seems to me that is a great point itself in the uplift—it means a stronger man, a better man.

These few words I bring to you, as an echo from the Vegetable Growers' Association of America. I do not know how closely this Association is allied with the National body of America, but I hope they will become more closely allied in future.

J. J. Davis: There was one point mentioned, that we can get along in our business without manure. If anyone can bring that to a successful working condition, why, it will eliminate one of our worst difficulties.

G. B. Hellerman: I did not go very far into that matter because I hoped discussion on the matter would come up.

F. F. Reeves: If the scientists can solve it in some way that we can get along without manure, they will solve a great problem of the gardening industry. In my travels around I have found that the men who use the most manure get the best results, and those who use little don't get any.

E. K. Purdy: I was very much interested in that myself. If vegetables can be raised without manure, I understand you would nevertheless need lots of water, and about 99⅔ per cent. of us have not got sufficient water.

J. J. Davis: I have the water, but I find it does not take the place of manure.

G. B. Hellerman: In reference to the matter of water: It has been mentioned here by Prof. Haskell that you need lots of it. In North Carolina and South Carolina they use largely crimson clover as a fertilizer. In Worcester, Massachusetts, they favour manure.

Under the heading of "Addresses by Fraternal Delegates from Ontario Horticultural and American Vegetable Growers' Associations," the Chairman called on Mr. T. D. Dockray, of the Ontario Horticultural Association.

T. D. Dockray: I am very pleased to be here to-day. I have frequently come to your Conventions to learn about the growing of vegetables, and when your programme came to me this year I looked to it to see particularly what events I wanted to be present at, and to learn about. But I did not notice until some time afterwards that there was to be an address from the President of the Ontario Horticultural Association. I was only recently elected to that position, and this is my first official appearance. If not reminded by Mr. J. Lockie Wilson, I would have come here simply as a vegetable grower in a small way. The extraordinary idea seems to prevail that horticulture deals only with the growing of flowers, in fact, asters or geraniums in the little round bed in the front lawn. As soon as you

speak of the splendid potatoes having been shown at a horticultural show, some one looks up and in rather a superior way says, "So you take in potatoes." So we have to drive constantly home to people, "Horticulture deals with flowers, fruits and VEGETABLES." We say it in capitals these days. For the last two years the Horticultural Societies have been bringing this more and more to the attention of their members.

Now, many people would think that you professional vegetable growers would feel annoyed at us for doing that, but you are not so in the least. We are telling our amateurs, we are telling everybody in this city of half a million to "Grow Vegetables," "Grow Vegetables." Now I am quite sure you have not found that hurt you one bit. I know it has not. I know that vegetables have been brought to the attention of people who knew nothing about the use of them before. Take my own case. Last year for the first time I tried to grow lettuce. Now, I would rather be able to grow a row of lettuce, properly spaced and with perfect plants in it, than to grow some of the smell pæonies or lilacs or other perennial plants that I grow in my garden. I found lettuce the hardest thing I ever tackled. Everything seemed to get at them. Even birds! I controlled those with a fancy line of cord strung with pieces of newspapers. I was on one of those vacant lots on College Street, 50 x 80, and open on all sides to the public. And I never knew that there were so many knockers in the world until I began to work in that vegetable garden In spring I started, as soon as the frost was out of the ground, to dig, and everybody who had a minute to spare—it is surprising the number of people who don't seem to work—came there and said, "What are you going to plant?" And I kept on digging—the hint to move on—but no. "You are starting too early, the ground is not dry enough." "Well, I am digging it," I would say. "Nothing will grow here, the ground is no good." "Well, we will give it a trial, anyhow," and so on. Two old chaps used to come around, and great friends they were. They were retired farmers from Bruce County, and had taken to horse-racing after coming to the city. They were knockers at first, and then as the vegetables began to grow, they got strong for me, and brought everybody to see the ordinary city man who made vegetables grow. However, one of them suddenly got the idea that the public would start in and steal everything on this lot. And his friend, who was less pessimistic, came to me one day and said, "My friend says he can steal anything on this lot bare-handed." Further than that, they had a wager of $5 up between them. So I put an outside border on that lot of Scotch thistles. Nobody tried anything with their bare hands on that part. They made quite an exciting border to the thing. But I heard nothing more about stealing with the bare hands. And these two old chaps came to the conclusion that I must be Irish, and knew how to take advantage of Scotch products as decorative and protective objects in the garden. But to show the benefit to you that this thing has been. I have acquired a respect for vegetable growing that I had not before, and remember I am off the farm. We grew vegetables in a large way on the farm: that is, we grew five or ten acres of turnips and eight or ten rows of carrots, and when it came to the hoeing season, father would sometimes say, "Those turnips are getting pretty weedy back there." The three of us children would look at one another, but do nothing. The next day he would come in and say, "The turnips are getting pretty bad." And that riled my younger brother. He had an old Dutch hoe, and he put an old hickory handle in and had the hoe ground up. It was like an axe, so sharp. And he said, "Come on." He would go at that hoeing in a rage: he would count up the drills, giving me so many and my sister so many, and take so many for himself, and when he started to hoe you could not

see him for dust. Father would come up from the other work to see if that boy was ruining the turnips, but he was doing it all right. It was only that he was in a rage at having to work, he hated it so—we all did, but he let it appear in the speed in which he worked. So you see I had some knowledge of vegetable growing. But when I came to the city lot, it all had to be learned from the ground up, and when I see decent looking beets or carrots, especially lettuce, in a shop window, I know what efforts some man has put in.

I had to put the undesirable vegetables, such as potatoes, on the outside. If I were to put carrots on the outside of these lines, some fellow would come along, gathering rags and bottles, and would go off somewhere on a bluff to get rags. Of course the old horse would move up alongside and would have his fill of the carrots. About the time he had enough the old fellow would make his appearance—and be, of course, oh, so angry, and rebuke the horse properly, but my carrots would be a sad looking sight.

Well, to sum up, I made fifteen cents an hour for all the time I worked on that garden, and you know that is pretty good pay for a lawyer in these hard times.

The members of the Ontario Horticultural Association will help you in the way of vegetables in every way we can, even by growing our own vegetables. We want you to help the Horticultural Societies in your own town: boom the vegetable department. It will help you in the long run. The people, in trying to grow vegetables themselves, will see how much better your product is, and they will get yours rather than their own. I am eating potatoes this winter. I grew them myself. Nobody else would eat them, they are so little; so your potatoes are free to go to the soldiers overseas. The Government can buy those.

Another thing is that through the members of the Horticultural Societies going into vegetables they are introduced to a great many vegetables that they did not know of before. A few years ago spinach was introduced here: to this day chard is not known much here. Take green peas. If someone goes out and tries to grow a row of sixty feet of green peas in his own vegetable lot, he will raise no objection the next season, no matter how much you ask for a half bushel of green peas. He will say that there has been work enough put on that half bushel that you are selling him to justify you in asking that price. So help the Horticultural Societies, as the Horticultural Societies want to help you. It is all for the general good.

J. J. Davis: Certainly vegetable growing has taken on an added dignity since the war came; we have lawyers, doctors, and other men who are going to considerable trouble nowadays to assure you that in some way or other they are connected with vegetable growing. It has come to the front during the war, and has made a great impression upon the people.

POTATO CULTURE AND MARKETING.

Douglas Maynard, Leamington.

I will give you our system of cultivation of potatoes. The first thing to mention is the soil. In order to get our soil into what we consider the proper condition, we first under-drain. Some think I am a crank on under-draining. In a farm of 75 acres we have nearly 70,000 feet of under-drains, and if I was to start over again I would have 100,000 in. Two years ago when we had so much rain you could trace where all the under-drains were by the appearance of the potato

plants. A person in intensive farming can make no mistake in putting drains in two rods apart. This cost me $60 an acre to do on my farm, and I am satisfied that with a normal year I will get that back in the first crop.

When we have the land thoroughly under-drained, next is the preparation. We generally plow in the spring, but have plowed in the fall. The spring plowing, we consider, retains the most moisture, so we do not try very hard to get much fall plowing done. For cover crops we use sweet clover—to my mind sweet clover is one of the best things you can grow to plow under. I have used it, and the stock take to it readily for pasture. We use along with clover, manure, at the rate of about 20 tons to the acre. I will give you an experiment we tried out with fertilizers. We manured land that was in wheat before, and we put on 500 to 1,000 pounds of fertilizer to the acre. It is not wasting it. We found

Planting early potatoes at Leamington.

that where we used 1,000 pounds to the acre we had potatoes about ten days sooner on the market. I would recommend 600 to 1,000 pounds to the acre. This year we propose trying out a fertilizer that analyzses 36.5, costing $80 per ton. Our rows are 40 rods long, and we figure 26 rows to the acre and by applying 1,000 pounds to the acre we put about 40 pounds to the row, 1 pound to the rod, and as it costs 4 cents a pound, 4 cents is all that is expended on a rod so that it does not cost you so very much after all. You need to get a couple of bushels more to cover your cost, and you will be able to see the results for three years at least.

We will suppose we have our land ready to plant the crop. We come to the seed. A great deal could be said on seed selection. We experimented with our own seed, keeping the seed separate, kept potatoes true to type, and I discovered that I did not improve them at all. Then I procured some New Brunswick seed, and put it alongside my selection, and I found out how far astray we had

been, but I did not know how big a mistake I had been making until I came to Toronto last fall. We can learn from the other man's experience for 50 cents on the dollar, where it would cost us $2 for our own. We have come to the conclusion that the imported seed from the northern climate is far superior to our own, no matter how good care we take of it.

The next is storage. For this coming year I got Irish Cobblers last fall from New Brunswick, and others from north of Fort William. I went up there in the summertime to see these potatoes growing. But they had been frozen two weeks before I got there, that was about the 1st of September. We went over the field and found that they were diseased just as ours were, but there was nice seed there. Those potatoes were planted early in June and yet there were Irish Cobblers there 16 to 17 ounces, and splendid seed. We arranged that they send them down by boat at water rate, bringing them down to nearly our own price. This year I propose to try experiments with Northern grown, New Brunswick and my own seed, selected stock, that is one year out from New Brunswick. They say you can use it for two years. After that it begins to deteriorate, no matter what you may do.

Now as to the variety: At the conference they decided that we should have just one early variety for marketing and that was the Irish Cobbler. Some recommended the Eureka. There was a good deal of argument about it, until we finally decided that Irish Cobblers and the Eureka were the same thing. The white variety takes better than the red. If everyone would make it a point to grow one variety, if you wanted to ship a car, they would all have the same color and look so much better when they arrived. You could not go up our way and buy one variety if you wanted to.

In the treatment of potatoes, I use one pint of formalin to thirty gallons of water, and leave the potatoes in it for one night. It is not always necessary to treat for scab, if you have good seed. This treatment sets them back ten days. It is much better to treat them in the fall.

Now as to the cutting: We have tried two or three kinds of machines, and this machine here is the only one that I would recommend. You will find with some machines that you will get pieces that have no eyes at all. We try to leave two eyes. We find that the larger you can make the seed the better are the results, because the young plant has more to feed on until it is big enough to fight for itself.

A MEMBER: Do you cut the seed end off?

MR. MAYNARD: No, we tried that one time, and we could not find a bit of difference. We try to make the size about one and a half ounces, and to plant just as soon as we can after they are cut, on the same day if possible. If it is impossible to plant them that day, tie them up tight in a bag and put it away so that the air can't get to them.

Now as to the planting: we generally try to have our potatoes all in in April. The machine we use is the Aspinwall, from which we got the best results. We plant them about one and a half inches in depth, as near as we can gauge the machine, which from experiment I find to be about the best average.

The machine covers them four inches deep, then we go over them with the cultivator as soon after planting as we can, good and deep, break the ground up loose, and then we go on with the harrow. This year I have bought a pair of Lever harrows. In that way you have your potatoes about one and a half inches below the average depth of the ground. We plant them about thirty-two inches apart and we try to drop the pieces with the machine thirteen inches apart in

the row. It takes about thirteen bushels to the acre. We leave the ridge on until we get them cultivated, then harrow them several times. Don't wait until you see the weeds, for then they have a hold and you can't turn them over to the sun. Harrow them as soon as they are up, in the afternoon. In the morning they are pretty tender and apt to break off. We cultivate them just as often as possible, say twice a week, as it helps the ground to hold the moisture. At the last cultivation, ridge them up a little bit or you will have a lot of sun-burnt potatoes.

We don't bother spraying for the blight with the early potatoes, because if we get them planted in June we don't get the hot days until July. After the 15th of July it doesn't matter if the blight comes because they are big enough to dig then.

Now about the spray—Paris green and arsenate of lead. Someone spoke about using one pound of Paris green to a barrel of water. You might as well put a pound of granulated sugar in; I have used Paris green and paste as high as three pounds of paste to the barrel along with Paris green.

I think dust sprayers are ahead of our present sprayers. One sprayer takes six rows. The advantage is that you don't need any water. For a large plot of potatoes it takes a lot of water.

The amount of moisture in your soil controls to a certain extent the time when you start digging. In the middle of July, potatoes would be worth $2 a bushel. If your ground is moist, it is sometimes just as well to leave the potatoes alone, because you would be surprised to see how much the potatoes increase in growth in ten days. On the other hand, if the ground is very dry and we do not think the potatoes are growing very much, we always dig them, because they don't do much when the ground is in that condition.

As to yield per acre: We have had as low as 75 bushels, but not of late years, and as high as 300 or 400. Here is a photo of Irish Cobblers on the 14th of August, showing how green the foliage was at the time of digging. One weighed 17 ounces. Those potatoes at that time were selling at $1.75 f.o.b. Windsor. They netted us $1.65.

In the digging of potatoes, we use wire pails for picking up. They have several advantages over the old pail, they are light and in picking them up no dirt sticks in the pail, and your bag is left nice and clean. These pails hold half a bushel. I got them from the Page Wire Fence Company, Windsor. It is advisable to buy them by the dozen. They are galvanized, and as the driver of the horses is not always as careful as he might be, and is liable to drive over them, we always give them a coat of white paint so that they will be readily seen. When we dig we make a row of sacks across the field, say every two rods. If you have three men picking up, every time they have a pail full, that fills a sack. In hauling, we tie up the first three bags and then put the others on top. We have a platform in the barn as high as the wagon. We have our scales arranged for weighing them—with an old buggy tire against which to set the sack. Every sack is weighed. If you go out to buy a bag of flour, have you ever noticed, while you pay for 100 pounds you get only 98, the other two pounds being for the sack. We have just as much right to get paid for our sacks. They are paying 13½ cents a sack to have them sent back to the flour mills. We propose this year to weigh up to 91 pounds, that allows us for the sack. If the purchaser returns the sacks, we will credit him for them.

A MEMBER: Can you do business that way?

D. MAYNARD: Why should they not pay for them? We have shipped onions, and they have allowed us at Halifax for those sacks. If you handle 2,000 or 3,000 or 4,000 sacks you can readily see it is quite an item.

Another thing I would recommend, and that is sewing the sacks. We used to tie them, and had quite a lot of trouble with claims of short weight. I know they were never sent out that way, but a sack may open, and when you have them sewn there is no danger of that. We have never had a complaint since

Potato digger at work.

handling them this way. When we ship them we tag our sacks with the destination on it. We sew the invoice in an envelope as we sew up the sack.

As to the marketing conditions: I suppose ours are a little different to some of yours, but I have a market down at the west end, and I generally try to call on my customers once or twice a week, call on them personally all the way around and get their order. I don't ask for a big order. I use the argument that I would rather get the potatoes fresh every other day—and in this

way they are all the time growing in my field, and also when I go around every time I collect as I go. We used to let accounts run on and on, and if potatoes started out at $2 and came down to 75 cents, if you went around to collect that $2 they seem to think it was like paying for a dead horse. But under the present system having our invoices they keep them on file and we do the same, and there is no trouble.

A MEMBER: Do you cultivate with the corn cultivator?

MR. MAYNARD: Yes, we use a corn cultivator first. This year I got a Massey-Harris Close-up and it just takes one row.

Q.—What kind of soil have you?

A.—Sandy loam.

Q.—What is the subsoil?

A.—Clay loam.

Q.—How far down is the subsoil?

A.—Six inches to two feet.

Q.—That is the reason why you need so much underdraining. How does your land lie?

D. MAYNARD: Fairly flat, not very rolling. We are south of London.

Q.—Do you find any difference in planting rows north and south or east and west?

D. MAYNARD: I have never noticed any.

Q.—I have been told it was better to plant north and south.

T. D. DOCKRAY: Here in Toronto we advise the school children on their 20 by 30 lots to plant a foot apart in the rows pretty much as you have done. The ground is dug and raked fine, and ready to plant. The children go along and just notch a hole with the hoe and put in the seed. How deep should they put that seed here in Toronto?

D. MAYNARD: In a small plot if the children had the patience, I would sun-sprout those potatoes. They would find that they would ripen 10 days earlier. Put the seed down about one and a half inches or a little deeper and as it comes up, keep adding to the depth.

T. D. DOCKRAY: You would not add to it before it comes up?

D. MAYNARD: Not too much; it will warm quicker by the sun.

T. D. DOCKRAY: We have had some difficulty here in this way in planting in hills, three or four sets to the hill. Some of our city people have gone ahead and just notched a little space with the hoe, put three or four sets to a hill, covered it over all smooth. Before the potatoes were up, a lot of weeds got the upper hand, so we were wondering if it would do to make a little hill over each potato set, so that they could hoe before the potatoes come up.

D. MAYNARD: That is something like blind cultivation, where the horses step on the plants. We like to use the harrow each time, keep the horse right between the row, then we try to go crossways once so as to prevent stepping on plants as much as possible.

HY. BROUGHTON: Do you use a weeder?

D. MAYNARD: Sometimes.

HY. BROUGHTON: How far from the row do you work when they get bigger?

D. MAYNARD: About six inches.

HY. BROUGHTON: In regard to marketing, do you ship in carloads or do you market openly?

D. MAYNARD: Sometimes in carloads. Some people think if a lot went into the potato business, their interests must suffer. Now, I find out that it is the

reverse. The more you have growing in your locality the bigger market you have. This year I had a chance to ship to Winnipeg. How about the California Fruit Exchange and all the oranges? It is co-operation, that is what it is. It would not matter if there were two miles of potatoes: the buyers would come to us and provided they were of one variety, we could ship them by the trainloads.

GROWING VEGETABLES UNDER GLASS.

J. J. Davis, London.

There are a few things that I want to speak particularly on to-day—some of the things that I found out from my own observation about vegetables under glass this last year, and some I think will be valuable to you. I am going to commence talking about the tomato crop under glass. In growing tomatoes under glass, one of the most important things is to get the fruit to set on the first and second bunches that form at the bottom of the plants. It is a mighty hard thing to do. I think I can say that I have been fairly successful in the growing of these crops under glass, but I have been weak on that point. The reason is that it is very early in the season when they bloom, about Easter time, and it is generally cold and you can't open up your greenhouses very much for ventilation, and there are no insects to carry pollen, and you have to attend to that yourself. The way I have always done is to take a little rabbit's fur or something like that and tie it to the end of a stick and endeavor to carry the pollen from one flower to the other in order to get the fruit to set. About two years ago Mr. MacLeannan told us to take a spoon, knock the pollen into the spoon and get the stigma of the blossom into the spoon. I thought that was too slow for a commercial man. But I tried that system of pollenization, and to my surprise we found that it was far ahead of the other system. Now it is pretty tedious work for a man to go over a greenhouse where there are some thousands of blossoms.

Q.—Would not the bees do it?

J. J. Davis: Bees will not work on tomatoes.

J. Lockie Wilson: Will they touch them outside?

J. J. Davis: No, but the wind does it outside. In a greenhouse at that season it is too cold, you cannot open up. The way I did was to take a spoon and just go around and hold the spoon and crook my finger and release it, and knock the pollen into the spoon. One chief advantage about that is that you know whether you have got pollen or not. You can see it in the spoon. In the other way you do not know. Last year my boy was home on Good Friday on his vacation, and thinking to help me out, he worked faithfully all day, and he set one tomato that day. So you want to be sure you are carrying pollen, otherwise you might as well sit down and smoke your pipe and have a good time. With a spoon you can tell. No matter how nice the day is (and we say on a nice bright day pollen sheds freely, but that is not always the case) if you start on the job and find you cannot get pollen into the spoon you might just as well quit and get at something else. It is a pretty sure thing if you get the pollen, because nature has provided a sticky substance on the end of the stigma of the bloom. Therefore, out of doors, when the wind scatters the pollen, and it settles on the sticky substance, it sets. I wondered how it was when I knew

I was carrying pollen and dipping all the blossoms into the spoon, that I did not set them all. So I began to start at close range, got a glass that would show me things that I could not see very well with the naked eye, and I found a great irregularity in the structure of the blossom. There would be quite a proportion of the blossoms of which the stigma did not reach out to the end of the blossom, and when I went to dip those, the blossom would simply dip over, and while I dipped the end of the blossom in, of course, the pollen would not touch the stigma at all. You have got to get pollen on to the stigma before you can do any good. The importance of this is that those first bunches that you can get on the plants come early and generally sell at about 20 to 25 cents a pound. The fruit that you get from the plants when you get away up 3, 4, 5 feet high, possibly sell at 10 cents a pound less than that, therefore, the great idea is to get the fruit set early.

D. MAYNARD: What would cause a tomato to drop off after it is formed?

J. J. DAVIS: They seldom do that.

D. MAYNARD: Well some get to be a very poor shape.

J. J. DAVIS: That is the lack of pollen. They are pollenized on one side and not on the other. That is the reason you generally get the poor shaped ones early in the season. When the weather gets warm and everything is right for good pollenization, you have very little trouble with poorly shaped tomatoes.

A MEMBER: How about an electric fan in the greenhouse?

J. J. DAVIS: There might be something in that; I have never tried it. I have tried blowing them, and apparently I could not. Spoon feeding is the best I have found yet, but it is like feeding babies almost. You would almost think a thing like that is impracticable, but it is allright. It is good business, the best I have tried out. The first time I tried it I just did a few blossoms, and a week after went around to see what the result was, and I found that wherever I went that day they had set.

A MEMBER: How soon after they come in bloom do you do that?

J. J. DAVIS: Just as soon as the blossoms come open. There are different varieties of tomatoes, of course, that are grown in the greenhouse. We grow the English variety, in fact, several English varieties, and the blossoms on them are shaped like a cone with the point at the bottom, and there is a very small opening at the bottom, in fact, it is so small that the pollen cannot get down and come out unless the stigma comes out. But the variety I grow out of doors are not like that.

The next point about tomatoes is how to overcome that very bad disease that we have been troubled with for a good many years. We call it "spot." It is a very injurious disease to greenhouse tomatoes, and we lose sometimes a great deal of money. I was speaking to a grower in London vicinity last year and he told me that he lost $100 at least, and a grower in Toronto told me the same thing: he estimated his loss at $100. I have known seasons when I have lost $100 or more from the same cause. Last year owing to a discovery that we made, I did not lose anything. That is one of the important points that I want to tell you about to-day. This disease that we call "Brown Spot" comes on the underneath side of the leaf and has a reddish appearance like down or fuzz. That is the spores of the disease getting ready to spread. I could not tell you how fast it would spread, but by the way the disease increases in the tomato, sometimes you would think it increased at the rate of about 15,000 per minute. We always used to eradicate it like mildew. We have burned sulphur for controlling mildew of lettuce. I had often thought I would like to

try it for this disease of tomatoes, but I was afraid to. Last year, however, we did try it. My man tried it out one night, and the next day when I went in, the plants all looked gone. I asked him whatever he had been doing to them, and he said he had been burning sulphur, and I said, "Yes, I can see that." The plants looked pretty sick. Fortunately it was only those just across one end and around the corner that were hurt. The reason for that was that he carried a little fire on a shovel, on which he put his sulphur; it formed a gas and a portion of it rose up to the plants. I had always thought that what would hurt the foliage would be still more liable to hurt the blossoms, but such was not the case. These blossoms set fruit just as good as where the foliage was not hurt, therefore I came to the conclusion that there was not much danger of killing the blossoms. I want to caution you against using this remedy for disease, because you know there is a great deal of difference between evaporating sulphur and burning it. I tried for several years to find out what the difference was, but did not succeed, until finally a medical student told me the difference was that you can take sulphur and evaporate it and if you have the proper vessels you can collect it again and have sulphur again; but once put sulphur onto the fire and you have a gas and a very dangerous gas for plants. You have all heard about the trouble that occurs at Sudbury about sulphur. The reason for that is that in order to burn the sulphur out of it, they roast the ore, and that sends out a deadly gas. You can kill anything in the greenhouse with that gas. I believe you could kill yourself with it. At the same time it is perfectly harmless if you go at it right. You know strychnine is considered to be a rather deadly thing, and yet we find that physicians use it in their prescriptions, and it is good if used rightly, and the same thing with sulphur. When I am using it for lettuce, I just take an old shovel and put a few hot coals with it, taking a handful of sulphur, walk up and down the house and keep dropping a little sulphur on the coals. The gas is drawn upwards and of course it does not strike the lettuce until it has become cooled and come down again. With tomatoes of course it is different, they are up on top, and besides you have to get this thing on the leaves where the disease is. So that you have to carry the sulphur along pretty close to the ground and let the fumes come up to the top. The great thing to bear in mind is that you must only liberate a little gas in one place. It is absolutely safe if you use it right, but at the same time I want to caution you if you don't take care you may cause yourselves a good deal of money loss; but I am satisfied that it will control the disease.

F. F. Reeves: What amount would you use in a given space in the house, say per cubic foot?

J. J. Davis: You will have to find out that for yourself.

F. F. Reeves: Is it just how much you can stand yourself?

J. J. Davis: No. The whole thing depends on whether it is a high house or a low house. There is another important thing I forgot to mention, and that is do not do it while your tomato vines are wet. My neighbor came over. His house is not much higher at the peak than your head. He came over and looked at my plants, and he said, "You can easily see that you have that disease under control," and I told him how I had done it. He went back and tried the same thing in his own house and burnt the plants badly. I said, "How did you manage to do this?" He said, "I forgot it was a wet night, and the plants were all soaking wet. I might have known better; in fact, I did, but I just forgot about it."

A MEMBER: I can make that a good deal easier for most tomato growers. If they would simply get an ordinary tile brick, make a little hole, get a low coal oil lamp about a foot high, and put a piece of old stove pipe across the top. They could burn that all night with no danger of hurting any of their plants.

J. J. DAVIS: But you are not burning the sulphur, you are evaporating it. It has got to come to a blaze. I got a tin pie plate several years ago and filled the pie plate full of sand and then put another pie plate on top of the sand and the sulphur on that, but in that way I was only evaporating the sulphur, while I am now talking about creating gas.

T. D. DOCKRAY: Do the evaporation and the gas both smell the same?

Irish Cobblers, harvested August 14th.

J. J. DAVIS: No, you can smell sulphur when you are evaporating it, but the burning has a very, very strong smell.

T. D. DOCKRAY: The burning of sulphur on a shovel with coals on it was one of the earliest ways of disinfection here in Toronto, and was used in the cholera epidemic here years ago.

A MEMBER: How often do you do that, Mr. Davis?

J. J. DAVIS: Last year we did it as often as we found the disease getting a little headway again. We controlled it so that it did not do us any damage and the tomatoes on top of the vines were just as large as those further down.

T. D. DOCKRAY: What is the name of that English variety?

J. J. DAVIS: Carter's Sunrise, it grows readily outside, too.

T. D. DOCKRAY: Did you ever try a camel's hair brush for the pollenizing?

J. J. DAVIS: I have tried that with the rabbit's fur. But the spoon is the best method by far.

SHIPPING TOMATOES.

W. R. Dewar, Leamington.

I wish to speak on the handling of tomatoes from grower to consumer, not merely the shipping of the tomatoes or the billing them out.

In Essex County, in the Western Peninsula, we are situated far from the main markets, which affects us in our shipping. We are what you might call "truck growers" and not market gardeners. I take it that a market gardener would be one growing crops around a large city like Toronto. We ourselves have to depend on long distance shipments and have no local market, consequently we have to grow our supplies in larger quantities so that we can ship in carloads. And when you realize the effect of our position, you will understand why certain methods of handling and selling are better for us than they might be for growers right around the city, and I am not going to attempt to advise any methods of selling to those who take their crop right into the market and sell direct to the consumer. Our shipping of tomatoes in Leamington practically extends from Halifax to Winnipeg, Saskatoon and Edmonton.

The package we use is a pine box, ends 9½ in. by 6 in. by ½ in., 1 piece, sides 19 in. by 6 in. by ⅜ in. Top and bottom 19 in. by 9 in. by ⅜ in., 2 pieces. They cost us $12.50 a hundred f.o.b. Byng Inlet, which does not include the corrugated paper on the inside.

The other package we use is the 11-quart veneer basket. Most of you are familiar with it. There has been considerable agitation to change that package, and get one that would suit the trade better and look a little fancier, but in a number of my trips and in chats I have had with business houses, they all ask us to keep the 11-quart basket. I found them very strong for them in Montreal and Quebec, and in Montreal one of the large buyers advised me that they had them shipped to New Jersey, where the veneer basket was very popular. The New Jersey bulletin recently issued says, "A new type of basket, known as the veneer basket, fitted with 'Leno' cover has been devised by a buyer in Swedesboro', after a little study of the demands in different markets for a better package than the tomato crate. This basket holds ten quarts, and the cover is fitted with a red netting to give the fruit an attractive appearance. Because of its convenient size and the ease with which it may be handled, and also because of its tendency to obviate bruising through frequent handling and hauling, it seems worthy of notice."

Now in regard to grading: We have no special grade that we can advertise, no definite rules for grades. We have an inspector in our company who goes about amongst the growers to see that packages are put up in good order. We have what we call the No. 1 Tomato, clean, smooth, regular and firm, free from bruise, split, sunburn or other blemishes, fair size. No. 2. A tomato, clean, smooth and firm, free from bruise, split or sunburn, slight irregularity and smaller than No. 1: and then the culls. We like to get the No. 1 tomato. Now a fair size is one that fills an 11-quart basket with three rows.

The packing is done by individual growers under supervision of company inspector.

Later in the season when the price of tomatoes drops below 50 cents a basket, we don't use the No. 2 grade, they are taken to the canning factory.

We have no centre packing. It is a question whether you could do any better by having it. The company inspector travels about amongst them in the

morning and afternoon, and about three or four o'clock when the tomatoes come in, he is back on our shipping platform and watches every load that comes in. The Government Inspector is there also to prevent fraudulent packing, and I have seen him making a shipper repack a whole load, where poor tomatoes had been put in the greater part of the basket with the nice ones on top.

Now we come to the selling part. The basis of selling is first, that of trucking direct to the market, which I mentioned earlier. Around the larger cities the growers pack their tomatoes and truck them direct to the market. In Leamington we have to ship them all out by express or in carloads. A few of our growers in the Leamington district who are not members of our company make individual f.o.b. sales. These men through their friends in Montreal or Quebec or some other city, get probably a little higher price than our members do. If they have any surplus they can only send them to the commission merchants in Guelph, Toronto or Montreal. The advantages of truck farming direct to the market and in these individual f.o.b. sales is that you get higher prices, probably. It is a fact that these men get higher prices than our men can get, but the disadvantage in selling in that way is a very limited market. In the earlier years when every man was sending out these quotations, if he happened to be a little below his neighbor in quoting, he would get the orders. If he was a little higher he would not get them. If a man is lucky and has the trade he can get a little higher price from the retail business, but that is his limit. With the amount of stuff that we have to ship out in Leamington, some days it would be impossible to get that stuff away in that method.

A third way by which our tomatoes are disposed of in earlier times is through dealers. These men would buy from growers when they felt like it. If they had a bunch of orders one day, they would pay a pretty fair price and buy most of the stuff that is offered; but if it turned out the other way, you had your tomatoes left on your hands. Even when they would buy and knew that they could sell, unless the competition was very keen in buying they always figured on the 20 per cent. margin. Now we in handling for the Co-operative Company only retain 10 per cent. of our actual sales, do not charge anything for any goods we send on commission, and at the end of the season divide *pro rata* the surplus that is left over. So that you can see the advantage in that one point. To begin with we base our commission on 10 per cent. instead of the 20 per cent. of the dealer, and if there is any surplus it goes back to the grower.

Another development is the commission merchant. I do not know whether that is a development on the dealer or not, that is the dealer that buys at the shipping point. The commission merchant, of course, in a large city I distinguish from the wholesaler. The wholesaler to us is a man who buys f.o.b. shipping point. There are a considerable number of men in Montreal who will not buy f.o.b. at all. Those commission men in the early days of the industry do help an awful lot. I can imagine a man in a small spot growing tomatoes. After he has disposed of his 10 or 15 baskets to the people around the town, he sends the surplus to the commission merchant at Toronto. He makes a little money. A few more start in growing, and they do as he does. The commission merchant is like the dealer, he does a certain amount of good in building up the industry, but after it gets to a certain stage it is up to the grower himself to take control of it.

A MEMBER: You are, then, a commission merchant, too?

W. R. DEWAR: Yes, we are commission merchants for the grower, to get him as much money as we can, and to help distribute his product.

HY. BROUGHTON: It is one man acting for the whole lot of growers.

W. R. Dewar: That is it. One of the disadvantages of shipping to the commission merchant is that the grower has no control of the market.

Our competition early in the season is the New Jersey trade. Once they are out of the way Leamington tomatoes control the market until the late tomatoes come in. I do not see why the commission men in Montreal and Toronto would not uphold our market. We would only want what the retail trade would pay us throughout the country and the wholesale trade. If the commission men would keep in touch with us better they would do away with a lot of that up and down of the market and absolute lack of control.

Now in regard to "Co-operative Selling." The advantages are that the grower can give all his attention to the growing. He knows his stuff is sold to the best advantage, and he can prepare for next day's trade. The uniformity in marketable article, that is one of the main things in co-operative handling. When

Growing melons in nets in greenhouse.

I said we did not have a grade, I meant by that that we did not have a stipulated grade that I could read off to you, but we have what we call a No. 1 grade, and every member of the company is supposed to put up exactly the same as the other member. That overcomes centre packing, and knocking tomatoes around too much is not as good as having them handled by the individual grower and bringing them in for shipment. Furthermore, the company is in position to get the market reports from all over the country. We ship as far east as St. John and Halifax, and as far west as Edmonton and Saskatoon. Now every day by 12 o'clock at the latest we have market reports from Halifax, St. John, Montreal, Toronto, Ottawa, and Winnipeg. The Winnipeg price practically controls the west, and we are in a position to know the best place to put our goods and how the market is holding out. One of these markets may break quicker than another. We might find out we are shipping too much to one market and hold off and ship to another point.

That runs to another advantage of co-operation, that is "Control of Distribution." If we had every one of those hundred individual growers shipping on commission, what is likely to happen? He gets a report back that Toronto market is 60 cents, Montreal 40 cents. They will all ship to Toronto except the wise ones, who will ship to the low priced market. The result is that that market breaks the next day, while the low one is up.

Extension of distribution comes in there too. A company like ours is able to ship much farther than an individual grower. Individual growers must necessarily make express shipments. We ship the heavy quantities in carloads. In that way we are able to extend our business. Even our express shipments go in carloads to Winnipeg.

We are able to make more f.o.b. sales, and that is what a Growers' Association is after in the beginning, getting the best results from a money standpoint. We make it a point to send on commission to Toronto, Montreal and Ottawa. We will not ship to Quebec city. If there is any breaking to be done, I would sooner break in the Montreal market than any. It is a very poor market, and if there is any throwing away of a carload of tomatoes, better throw it away on a market that cannot be any worse.

MEMBER: What about the Ottawa market?

W. A. DEWAR: It is good if you keep it limited. We would not ship a carload there. We ship by express the first of the season; later on, when the price drops, the goods go out in refrigerator cars. We ice the cars before shipping tomatoes. You do not want to over-ice them. They ship pretty well without too much ice. We have had no trouble at all during the last three years. This last year we had no rebates at all on cars to the west, and we have shipped as far west as Edmonton, Saskatoon, and Moose Jaw. We will admit we can improve our packing, but we put up as good a package as any. Mr. Clark, who spoke before the Fruit Growers in Toronto, said the Leamington pack was the best one that came in here. I am familiar with Niagara district conditions, having been brought up there, having worked through all that fruit district, and I know that they give only half the attention to packing that they do in Leamington. But at the same time we have to admit that we can always keep improving along that line. We also want to recognize that the distributor, both wholesale and retail, is necessary, but we think the retailer asks too much profit. This is a hit in the dark; we have no figures with which to substantiate.

Then we think that Toronto, Montreal and Ottawa commission men should buy from us f.o.b. They have bought on the f.o.b. basis from American companies, but because they started buying on commission from Leamington, they think they should continue to do so.

Moved by T. DELWORTH, seconded by J. DANDRIDGE: "That we as vegetable growers hereby strongly protest against any restrictions being placed in the way of a free sale of our produce, and would urge that it is to the best interests of the city as well as the country at large to facilitate the free delivery of foodstuffs especially during war time." Carried.

THE GROWING OF CAULIFLOWER.

CHARLES SYER, BARTONVILLE.

In the growing of cauliflower three things are necessary—good seed, good soil, and good cultivation. Good cultivation is absolutely essential, and cauliflower responds readily to it.

For the early variety I grow the Snowball, sowing the seed the first week in March in hotbeds. After it is up in rough leaves I transplant it about two inches apart in frames. After it has been there a couple of weeks I transplant it again into flats, a little further apart, to get a goot root system, so that when set out in the field the roots are not disturbed very much. By transplanting it twice you keep it growing. When it has a check it is more inclined to button in, and not form any sized head at all.

MEMBER: How deep are your flats, what depth of soil?

C. SYER: About two and one-half inches. The flat I use is the ordinary salmon box, about three-quarters full of earth. I can get them at $3 and $4 a hundred. They are not very expensive in that way. Planting them in a field, I generally plant them in rows thirty inches apart. I cultivate as often as possible, every week, generally once a week, and keep them growing fast. If they are once stopped it is hard to get them started off again. When the seed begins to show, as soon as the button shows, I draw the outer leaves together and tie them up. I like to have about 15,000 or 20,000 in my late crop coming in about the first of September, not quite so many in the early crop.

I sow my seed outside in rows about a foot apart, using a drill, and in that way I get good stout plants, keeping them well watered.

Q.—When do you sow the seed?

C. SYER: About the 15th of May. I sow about twice as many as I need.

Q.—What kind of soil do you sow seed in?

C. SYER: A dark sandy loam. I don't like to start my plants in too rich a soil in the frames.

The idea of sowing so many plants outside is that in raising 10,000 to 15,000 more plants than I need I get from $5 to $7 a thousand for them, and in that way the seed costs me nothing, and I am paid for my work and trouble as well.

The seed used is "Snowball" and "Urquhart." I like to cultivate them frequently, every time I have a chance. I like to have the soil well prepared, using about forty to fifty tons of manure to the acre, plowed down. I also figure on a crop of radish or beets, before the cauliflower, as the beets, radishes or lettuce come off about the first of July.

Q.—What kind of fertilizer do you use?

C. SYER: I use the tankage. I would not advise tankage where there is no irrigation system. You do not get the benefit from it. The water seems to bring it out more. If you have not an irrigation plant I would advise other fertilizers. We use a little nitrate of soda, very little, around each plant when they are about two-thirds grown.

I make another sowing after that, about the first week in June. The last or the third sowing is for storing during the winter. In storing them I take them out of the field, take a potato fork, loosen the roots well, take a long knife, and cut the tops off. We use the regular hot-bed frames, and we stand them along in a row and I put a brick in each corner, then about three or four inches of soil on the inside of the frame, banking them. I start on the one end of the frame, dig a

trench and set the cauliflowers in that trench and cover up the ground and roots, until the frame is filled, and then put under each corner a block of wood to allow the air to pass, and then cover over with boards to keep the sun out. Later on we keep adding manure to keep the frost out. We have had some trouble with mice, and if there was some kind of rat poison put around the roots, I believe we would get away from that trouble. This cauliflower I have here was put in the last week of October and was taken out of the frame yesterday. That was no bigger than a fifty cent piece when it was put in. I have been getting from $2 to $3.50 a dozen for these; they retailing from 40 to 50 cents apiece.

Q.—The average grower is afraid to sow cauliflower?

C. SYER: They are afraid of the price of the seed. I find that by sowing a lot of seed I get away from that expense. They do not seem to think of the price of the seed at the rate they pay for the plants.

Q.—When you put it in the frame, do you cover the whole plant?

C. SYER: No, just about three-quarters of its height.

Q.—Do you have much trouble with worms?

C. SYER: I dust the plant with "bug death."

Q.—Are you troubled with the root maggot?

C. SYER: Once in a while, yes. Take a barrel of water and throw a bushel or so of tobacco stems in it, then send a boy with a pail and a small dipper, and if he takes a little out of the pail and throws it at each root, it does away with that trouble.

THE CULTIVATION AND GROWING OF MELONS.

V. ROBINET, TECUMSEH.

I have been growing melons for fifteen years, and the last few years I have found that like other products, if you raise extra good ones you have no trouble to sell them. Everyone will know that in a short time and they will purchase all you raise at the price you ask.

First we sow the seed in a hot-bed. You might put your seed in the soil and cover with about one inch of fine earth. Or sometimes we take glass, using a small size about one by one and a half inches wide, and we transplant about two weeks after. We put about four seeds in each sod, and when the plants have four leaves we take two plants out. We keep the two best ones, because two are enough for early melons. When they begin to blossom they are ready for the field. Get your field ready before you transplant them. The way I do, I take a row and dig every six feet apart a hole twelve inches deep and the second row seven feet from the first one. Have them straight so as to make it easy to cultivate. Keep them well cultivated and clean of weeds. If there is any shade they will not be so good. The hole is filled up with good, well rotted manure. Then we put a shovel full in each hole, cover the manure with soil so it will not dry. Then around each hill we put commercial fertilizer. I use two per cent. nitrogen, ten per cent. phosphoric acid and two per cent. of potash, because of the scarcity of potash. After six weeks you can transplant. The first to the fifteenth of June is the best time to transplant. I take what they call a tomato crate and transplant to the field. I put my sod on top of the hole and the fertilizer hilled up about six or eight inches high around the plant. As soon as it starts to grow we put a fertilizer around the hill; about a week after, we

cultivate on one side, and two or three days after on the other side. As soon as the melons are about an inch in diameter I trim the vine two joints out from the melon, so that the plant will throw all its strength into the melons. After that keep them clean by hand or by machine. Two or three weeks before ripe turn over each melon so that they will ripen on both sides. You want good warm sandy land, no dampness. You grow the very best melons on that land.

Q.—What kind of melon do you grow?

A.—I grow what is called the Salmon Color, the Osage, the Defender, the Irondiquoit, and the Tip Top. The best melon for shipping is the Togo, and the best eating, too.

Q.—Where can you get the Defender seed?

Melon crop of Victor Robinet, Tecumseh.

V. Robinet: From D. M. Ferry, Windsor. Sometimes I raise my own seed and sometimes I buy it. The trouble in growing your own is that sometimes the seed gets mixed.

Q.—How do your melons sell?

V. Robinet: At first from 25 to 50 cents apiece. For the Osage the general price is $2 a bushel to wholesalers. We have a market at Detroit, but I have never been there. About 50 loads go from Windsor to Detroit every day.

Q.—How many melons do you get off a single vine?

V. Robinet: The Tip Top or Irondiquoit or Defender, yield about four to seven melons. Two years ago I got out my first crop, and as it was in blossom then, I grew a second crop, some of which ripened, but the frost got them.

J. Lockie Wilson: What are your reasons for planting in sod?

V. Robinet: It is cheaper. We can do that ourselves. You can put in boxes just the same.

J. Lockie Wilson: I suppose this sod on top of that hill keeps the sun from drying out your soil?

V. Robinet: Yes.

THE VALUE OF GARDEN COMPETITIONS.

W. T. Macoun, Dominion Horticulturist, Ottawa.

If one were asked to state in a few words what is the greatest value of a garden competition we should say "It is the inspiration to greater effort and higher achievement." But while one could in a few sentences such as that say all that was really necessary on the value of competitions it is presumed that something more is expected.

Makers of gardens may be divided into several groups. First, those who are enthusiastic and ignorant but anxious to learn; second, those who are ignorant, but too confident or conceited. They have the confidence of ignorance, which is not an uncommon characteristic of the man or woman who has read a great deal about gardening and thinks he knows all about it although his practical experience is very small. Then there is the skilful and successful gardener who has good reason for thinking that he is in a class by himself, but fails to recognize the merits of others: and, finally, there is the enthusiastic, successful and skilful gardener with his place clean and in good order, always on the lookout for information and eager to impart his knowledge to others.

A garden competition puts each of these gardeners into his proper place, and opens the eyes of each to his own short-comings and to the skill and good taste of others. The gardener, in thus having a proper value put on his efforts by the judge, gets both information and inspiration to greater effort next year.

The friendly rivalry which a garden competition brings about leads to intercourse which would not otherwise take place, and the visits which competitors pay to one another's gardens, and the observations made from the street and the new varieties with which they are becoming acquainted do much to bring about a greater incentive to improvement, and the standard of each is raised.

Not only is the owner of the garden benefited by the competition but naturally his whole family is more interested in the garden than they would be if it had not been entered in the competition, and there is no doubt but that the younger members will be more likely to make gardens of their own later on if they go from a home where there has been a good garden.

Then there is the value of a garden competition to the town or community. Good gardens scattered here and there through the city or country give an enviable reputation to the community and the more good gardens there are the better the reputation.

If a garden through the special effort which a competitor makes becomes conspicuously better than those nearby the likelihood is that the owners of the latter will at least keep their places neater than they otherwise would do. It is seldom that a garden which has been raised to a certain standard through the efforts made to win in a competition is let go back to the condition is was before.

There have been garden competitions held in the City of Ottawa since 1903, and it is believed that very good results have come from them. The first competition was inaugurated by Lady Minto, the second by Lady Grey, and then the Ottawa Horticultural Society continued the good work. Last year the Ottawa Vacant Lot Association held a very successful vegetable garden competition, and there has been one in connection with the St. Andrew's Church Glebe Gardens, Ottawa, for the past three seasons. The Provincial vegetable field and garden competitions are well known and have been productive of much good.

There should be a score card for best results in a garden competition. It is useful both to the judge and to the competitor. Judges differ in their ideas of the value to be set upon different things, and when judges are changed every year competitors never know what to expect or to prepare for, but when a score card is available both to the judge and to the competitor each acts or should act according to it.

Following are some score cards used in Canada which have come under the writer's observation:

THE OTTAWA VACANT LOT ASSOCIATION.

CLASS "A" SCORE CARD.

For Lots growing various Vegetable Crops.

Lot No..... Maximum, 100 points. Based on the following: Area.....

	Possible Score.	Judge's Score.		
		July.	August.	September.
1. Arrangement of the crops and method of planting and caring for them.....	20			
2. Uniformity of the stand.....	10			
3. Healthiness and freedom from disease and insect pests.....	15			
4. Number of kinds grown and value of the vegetables	30			
5. General neatness of the plot and freedom from weeds, etc.....	25			
Total.....	100			

Date..... Judges.....

Name of Lot Owner.....Address.....

Prize awarded.....

THE OTTAWA VACANT LOT ASSOCIATION.

CLASS "B" SCORE CARD.

For Lots growing two-thirds or more Potatoes.

Lot No..... Maximum, 100 points. Based on the following: Area.....

	Possible Score.	Judge's Score.		
		July.	August.	September.
1. Arrangement of the plot and method of planting and care	15			
2. Yield, quality and uniformity of the stand	30			
3. Healthiness and freedom from diseases and insect pests	30			
4. General neatness of the plot and freedom from weeds, etc.	25			
Total	100			

Date.....

.....

Judges.

Name of Lot Owner.....Address.....

Prize awarded.....

SCORE CARD FOR JUDGING VEGETABLE GARDENS.

St. Andrew's Church Glebe Gardens, Ottawa.

	Possible Score.			Judge's Score.
General appearance considering:				Potatoes
(1) Method of planting	10			
(2) Arrangement	10			
(3) Uniformity of stand and growth	15			25
(4) Vigor and freedom from injuries	10	45		25
Quality and value of vegetables		20		
Assortment of vegetables		20		
Cleanness and neatness		15		50
Total		100		

.....

Judge.

Date.....

Where more than one visit is made the score for method of planting and arrangement is not made after the first visit.

SCORE CARD—GARDEN COMPETITION.

ONTARIO DEPARTMENT OF AGRICULTURE.

	Possible Score.	Judge's Score.
Layout and general arrangement, considering:		
(a) Straightness of rows and proper spacing of plants	10	
(b) Arrangement of space in garden	10	
(c) Neatness and cleanliness round buildings and yards	10	
(d) Neatness, care and cultivation	40	
(e) Clean fence corners, headlands, pasture plots	10	
(f) Closeness of planting and marketable value of crop per acre considered	20	
Total	100	

If points are lost owing to natural difficulties impossible to overcome, the judge may allow a maximum of 5 points.

SCORE CARD USED IN JUDGING GARDENS IN THE LADY MINTO AND LADY GREY FLOWER GARDEN COMPETITIONS.

	Points.
General effect	20
Cleanness and order	20
Floral display	20
Labour and enthusiasm	20
Total	80

Five visits were made making a total of a possible 100 points for each.

Let me repeat, then, what was said at the outset, that the greatest value of a garden competition is the inspiration to greater achievement; but in addition, there is the increase of knowledge, the better understanding of one's ability to make a garden, and the influence of the higher standard set by competitors on their neighbors, and on the community at large. "A garden city" and "a city of gardens" are pleasant sounding expressions which any city would be proud of having applied to them, and garden competitions will do much to bring the gardens of a city, town or rural community up to such a high standard that they will get a reputation for their many good gardens.

Moved by H. BROUGHTON, seconded by F. F. Reeves, "That in view of the fact that the Government are urging all our citizens to devote their energy to increase production of the products of field and garden, we, the members of the Ontario Vegetable Growers' Association in convention assembled respectively urge the Government to admit, free of duty, commercial fertilizers that are now largely used in the production of farm crops, and that a copy of this resolution be forwarded to Sir Robert Borden and Hon. T. A. Crerar." Carried.

CO-OPERATIVE MARKET GARDENING.

GEO. RUSH, HUMBER BAY.

Market gardening as at present developed is an unorganized industry, conducting its business in a very unsystematic way. There is no controlling influence to direct the industry in its relation to markets either local or distant. Each person is engaged in conducting his business solely by his very limited knowledge of

local factors or his personal ability to sell his produce on a well defined route which is, however, always liable to change at short notice leaving the salesman in doubt and uncertainty as regards future market days. Now in every business there are elements which tend to upset markets over which there is no control. But the market gardener has to contend against two forces; namely, 1. The variations of climatic conditions. 2. The lack of knowledge of his own industry outside local territory.

What can be done to remedy, or at least assist him to overcome present conditions? We must first examine the effect upon market gardening and compare it with other well organized industries.

The market gardener is confronted, first, with climatic conditions which govern the planting of crops. He is largely dependent for success upon the season, his best prepared plans and expert judgment and the labor of many days may be destroyed in a few hours by the forces of nature. Then he plants his crops according to his previous experience of the varieties best suited to soils or the needs of local markets. He may be fortunate in obtaining good results and a

The two rows to the left are Eureka potatoes from Northern grown seed; the other rows are from home grown seed.

bounteous yield and looks forward to reaping his reward. Now, many varieties of vegetables are of that nature that being matured they must be disposed of at once or they become a total loss. He is therefore compelled to sell. He goes to market quite ignorant as to conditions prevailing. Now there may have been imported into the local market heavy quantities of the very variety he is compelled to sell. What is the effect? The retailer with whom he does his trade, is well informed, he enters the field against the grower with great advantage and at once proceeds to use that knowledge for his own good, in attempting to lower prices.

When this is done on an unorganized trade, and with products which are perishable, the trade becomes almost extinct and doubt and uncertainty reign and as a result the produce is sold by each individual at the best terms possible with hopes that by next market day conditions will have improved, only to go through the same trials again on the next market day. This causes, at times, very serious financial loss and, carried through a season, often means, to the weaker producers, failure in business and always loss to the strong.

A well organized trade will control its prices which are fairly uniform through-

out the Dominion. The gardening industry, through lack of organization, is at the mercy of a variety of circumstances.

Let us examine some of the features and see what so far has been done to organize trade.

Local Markets.

Toronto vegetable growers have felt, up to date, fairly secure in what they believe to be a safe market for local growers, and have been fluctuating between good and indifferent markets subject to local competition. But, with transportation facilities increasing year by year, competition increases and further tends to unsettle local markets and enlarge the difficulties of the growers. We have seen districts within the Province of Ontario develop into large vegetable growing sections with only limited local markets. They are also unorganized, and, consequently, are liable to heavy losses in shipping, and have only the information given them by the commission houses or agents employed in distant markets. These districts will increase as time goes on and will cause further competition without bringing about that compensation to the grower which under proper control he would receive.

Let me explain a point. Suppose tomatoes at some period of the season become light on the market, and the commission houses at once 'phone or wire to all distant points to forward all possible. Now, none of the growers are aware how many growers will ship, or how much they will ship, and the result is a congested market. Prices fall very low; the shipper from the distant point is suffering and local growers find their market temporarily closed or are forced to sell at a reduced rate. This applies to the trade as a whole. A great deal of money is often lost to the grower because there is no market to dispose of surplus stock owing to these conditions.

What can be done? I must confess that, looking back, it has not been very encouraging to the small number of men who have given of their time for a good number of years, striving to bring growers together to discuss these matters in a business way, and to organize them into a society for mutual protection, and I feel our thanks are due them for their services which were given sometimes at a great personal inconvenience in promoting useful information to the trade.

I feel that the step taken last year by the Department of Agriculture in taking a census of vegetable crops grown in the Province, namely, number of acres and localities, is a wise one, and if there was added to it information as to the facilities for transporting and cost per ton to Toronto we could form a more correct opinion on the effect to local prices.

There should be a central office for this Province with a permanent official whose duty would be to receive all communications from local branches and to receive from these branches lists of goods ready for market, their quantity and condition, and to send out in return the condition of all markets in the Province to guide growers as to shipping, etc. If in addition to this office a receiving and distributing department was established by the Provincial Vegetable Growers' Association, growers would not be under the control of the people whose only interest in the trade is how much profit they can make for themselves, but they would be able to place the goods intelligently upon the markets at the best possible moment. But this requires that all growers shall organize themselves into a protective co-operative society, and must be met by financial aid. A permanent central staff would have to be maintained. The chief should have a knowledge of gardening and the society could be operated on well known lines in shares borne by individuals

of the society and incorporated according to law. Under proper management over supply of goods could be disposed of to canning factories or to public institutions at a cost covering all expenses.

Purchasing of Seeds.

Seeds are an ever-growing need, and upon their production depends not only this industry but the welfare of the nation, and under co-operation a greater uniformity of prices would prevail. Seed merchants could deal more economically with an organized society than with individuals. Information on all matters connected with vegetable growing would be more widely circulated and the scientific knowledge possessed by Government experts would have larger scope, and assist in improving both type and increase of crops, whereas at present too many gardeners look with disfavor upon all research work done by these men whose special study has fitted them to guide and assist us in our work.

If we desire to obtain for our industry that place in our national life we must do our part to obtain those results that can only come through a united effort, by thorough organization of districts, a central executive office and distributing house in all markets, obtaining all assistance to increase our knowledge of our resources, means of exporting to other provinces when occasion requires, and upon all matters tending to our mutual advantage.

Initial labor in forming local branches would be the first difficulty, but the assistance of the District Representative of the Department of Agriculture where market gardeners live would materially help. We cannot expect to continue along the course that has suited our forefathers. We must change our methods to meet existing conditions. If we are wise we shall prepare for the future development of this fair Dominion because possibilities for future trade are tremendous owing to the great industrial training this nation is going through. We know that with the development of the great natural resources of this Dominion will come a great industrial population to be fed, and unless we are able to meet these conditions we shall surely be forced to undertake market competition blindly and leave to others with more foresight the business of growing and marketing the immense quantities of vegetables which will be grown in the Province of Ontario in the next twenty-five or fifty years.

I must ask you to consider this topic in its broadest viewpoint, as the subject is a large one and worthy of careful consideration, for conditions in the world are changing rapidly, and we as vegetable growers must be up with more foresight and ready to meet changing world conditions.

A Member: Do you propose to run this under a similar plan to that of the Co-operative Farmers' Association and the United Farmers of Ontario? The experience with this Association has been that it needs a good many members having a good deal of enthusiasm and a good deal of co-operation; but I think it is going to work out all right. They have been in existence in Ontario only a short time. Their methods are modelled along the lines of the Western Grain Growers, and before the Vegetable Growers talk of that on a big scale, they would do well to appoint a committee to go and interview the United Farmers.

Mr. Hellerman here referred again to the good co-operation had done in Providence, and stated that the same scheme worked there was now in operation in twelve states of the United States.

H. W. Tinkham, of Warren, R.I., is the father of this movement. He is the man who went to Washington and got the ear of the powers that be, and boosted the thing through.

J. Lockie Wilson: I move that a committee composed of J. J. Davis, Geo. Rush, F. F. Reeves, Thos. Delworth, G. B. Hellerman, F. B. Housser, Pickering, Henry Broughton, Sarnia, and the mover look into this matter and report as soon as possible, and that the President, F. F. Reeves, Thos. Delworth and the mover be a delegation to the Convention to be held this summer in Detroit, where this matter is to be discussed, and to report fully at our next annual convention.

Mr. Dandridge seconded Mr. Wilson's motion, which was carried.

EXPERIMENTS IN VEGETABLE GROWING AT VINELAND.

O. J. Robb, Vineland Station.

The primary object of all our vegetable work at Vineland is to serve the growers. We aim to do this as far as possible by the following methods:—

1. By comparative testing of varieties and reporting the results.
2. By improving our present varieties through selection and cross breeding.
3. By the distribution of seed of these improved varieties to the growers.
4. By trying out different cultural methods and reporting results.
5. By investigating any important problem relating to vegetable growing brought to our notice by the growers and reporting on the same.

In order that our work should be of the greatest value it must be thorough and comprehensive; that is, we must consider it carefully in all its phases and spare no effort to make our results reliable and thus give a true representation of the objects aimed at.

Owing to conditions at the Experiment Station we have to give most of our attention to a few crops which seem to be of chief commercial importance. The other crops are to be taken up later as thought best.

Thus we have during the last two years devoted most of our time towards developing and improving the following vegetable crops: Asparagus, potatoes, peas, tomatoes, beets, carrots and onions, by selection and seed production. Other experimental work in a small way is being carried on with celery, corn, beans, parsnips, melons and various other vegetables.

Asparagus Testing.—Our irrigation tests gave an increased yield of 840 lbs. per acre. This plot is now four years from planting and gave a yield of 2,652 lbs. per acre, or an average yield of .4 lbs. per plant. This yield is not as large as it might have been had we cut longer in the season.

We have eleven varieties in our variety plot which was planted in 1915 and has been cut lightly for two seasons.

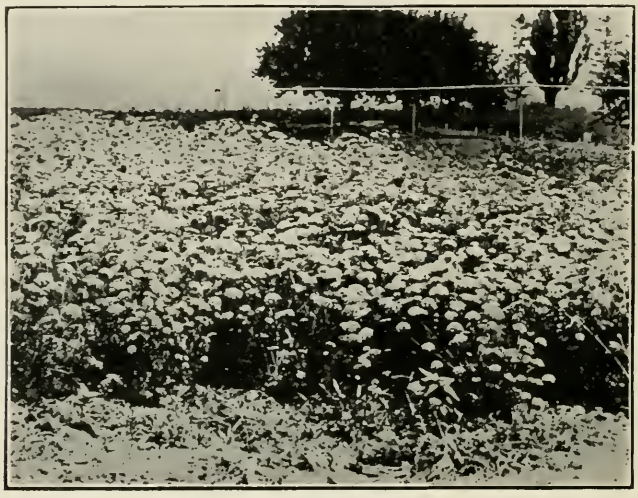
The highest yielding varieties are:—

Columbian White with .56 lbs. per plant.
Dreer's Eclipse with .40 lbs. per plant.
Barr's Mammoth with .31 lbs. per plant.

Last spring we received some seed of a specially selected strain named Washington from J. B. Norton, of the U. S. Department of Agriculture. This variety gives promise of being very vigorous and hardy, as it looked much better than another variety grown from our own seed.

Potatoes.—Our experiment of Northern Seed vs. Southern Seed has given very definite results in favor of using Northern Seed. The Early Eureka variety was the only one used, but seed was secured from different localities in the North. Results for 1917 gave an average increased yield of 60 bushels per acre in favor of Northern Seed. The 1916 results gave a gain of 91 bushels per acre in favor of Northern Seed.

From the two years work we believe that under average conditions Northern Seed will give much heavier yields, and besides the crop may be lifted nearly ten days earlier.



Carrot seed plants at Vineland.

Asparagus.

Potato Selection Work.—This work was started in 1915 and includes over one hundred individual hill selections of the following varieties: Carman No. 3, Gertrude, Davies Warrior, Delaware and Walter Raleigh. Each year the best hill of each selection was saved and replanted. Last fall all of the hills of each selection were saved and will be used in 1918.

The selections were based on the number of tubers per hill and uniformity.

The following is a brief summary of results to date regarding number of tubers per hill:—

Davies Warrior: 35 per cent. gave a large increase; 25 per cent. gave a small increase; 40 per cent. gave a decrease. Best selection increased from 4 to 11 tubers per hill.

Carman No. 3: 16 per cent. gave a large increase; 50 per cent. gave a small increase; 34 per cent. gave a decrease. Best selection increased from 4 to 10 tubers per hill.

Delaware: 20 per cent. gave a large increase; 30 per cent. gave a small increase; 50 per cent. gave a decrease. Best selection increased from 4 to 11 tubers per hill.

Gertrude: 20 per cent. gave a large increase; 55 per cent. gave a small increase; 25 per cent. gave a decrease. Best selection increased from 5 to 13 tubers per hill.

Walter Raleigh: All gave a large increase.

Peas.—We have been selecting individual pea vines for three years from eight varieties. The characteristics for which selection was made were largest number of pods per vine and greatest degree of uniformity in maturing.

The following is the amount of increased pod production figured out on the percentage system:—

Champion of England	126	per cent.	increase.
Telephone	100	"	"
Abundance	90	"	"
McLean's Little Gem	62	"	"
Gradus	50	"	"
Thomas Laxton	48	"	"
Alaska	31	"	"
Hortford's Market	22	"	decrease.

Seed Production of Beets, Onions and Carrots.—Since 1915 varying amounts of vegetable seed has been produced each year with fair success. This past year the seed was very good in quality.

All of our seed is grown from selected stock, and the greater part of this crop of seed including carrots, beets, and onions, is the result of two years' selection of roots and two years' selection of the seed-bearing plants.

I want to point out that there is something in the selection of the seed plant, not alone for greater seed production, but also for a high quality type of root or bulb. We may often be able to isolate a particular strain by this means alone.

Fairly large crops of other vegetables are produced each year on a commercial scale. Our surplus produce is placed on the market. In this way much experience is gained by different methods of handling and cultivation.

We have had good success with transplanted onions, early cabbage, early celery and melons. We have selected a good type of the Montreal melon and one of the Paul Rose type.

Through the Hybridizing Department at the Station we are trying to originate a cucumber of the White Spine type which will set fruit without fertilization of the blossoms. Crosses were made with the Telegraph on White Spine and Fordhook Famous. Plants from seed of these crosses set a considerable percentage of fruits without fertilization. The second generation of plants grown in 1917 did not give satisfactory results owing to bad weather and a severe attack of the wilt. More work is necessary to make sure of getting a cucumber of this type, but we know that we can get it.

Tomatoes.—We have carried on some extensive selection tests with over twenty varieties, making over one hundred individual selections.

Characteristics sought were earliness, productivity and uniformity.

Owing to the very poor season last year our results do not indicate all that we have gained from our selections. But leaving out of consideration the 1917 yields we find that in 1914 the average yield of tomatoes per acre was 464 bushels. This was increased to 580 bushels in 1915. And in 1916 this yield was increased to 1,000 bushels per acre.

Our highest yielding varieties in 1916 were Ruby, Beauty, Earliest of All, Alacrity, Success, Chalk's Jewel, Ignotum and Bonny Best. In 1917 the highest yielding varieties were as follows: Burbank's Early, Earliana, Bonny Best, Burpee's Whole Salad, Earliest of All, Royal Red, Ignotum and June Pink.

Growers who have tried our selected strains of vegetable seed report much increased yields over other seed.

We are willing to send small samples of seed to any grower who desires to try some of our selected strains.

Moved by L. R. Martin, seconded by O. J. Robb: "That arrangements with the Government be made by which the High School boys and girls helping in agricultural production may not be required to return to school before the end of September owing to the fact that we consider that this is the time when extra help is most needed." Carried.

Miss Harvey in charge of the Ontario Government Employment Bureau then addressed the Convention as follows: "I am not going to take up much of your time, because I know you are here to see the moving pictures, but one of the films shows the National Service girls working on the fruit farms last year in the fruit district. The girls did a lot of work among vegetables and were successful. Some of the growers grew vegetables as well as fruit. If any of you growers want to get girls this year, the Ontario Government Employment Bureau at 15 King Street East will be only too glad to talk it over with you. We brought the matter up before the fruit growers, and promised to recruit 5,000 girls for them this year. We can easily get 500 to 1,000 workers for you, because there are so many girls who are willing to go out for five or six months to take up the work in any part of the Province where they can do any good.

The important question is what the terms are. The girls have asked the fruit growers to give them $9 a week without board or $5 a week and board. They will be paid piece rates on the smaller fruits, but the rates are so based that they will be able to get $9 a week, without their board. When it comes to tree fruits, they will pay them $9 straight, no piece work.

We are also training a great many girls to go out on dairy farms and mixed farms. There are many things girls can do, such as cultivating with horses, etc. A number of our girls did that last year. If through our efforts we can meet the present labor shortage to any extent we will be glad to do it, but it will be necessary for the farmers to send in their orders soon. If we send a club into any district we prefer to have someone in the camps in charge of them, as parents want to know that they are taken care of. The film that is shown to-night will show you the type of girl who went out. The majority of them were girls in their twenties, not youngsters, they are full grown, strong girls.

ADDRESS.

W. B. Roadhouse, Deputy Minister of Agriculture.

I am sure that this meeting, which is the concluding session of this convention called for business and self-improvement purposes on the part of the Vegetable Growers' Association will have many features of interest to all those engaged in any branch of this important industry.

I am reminded by an occasion of this kind of a little nursery rhyme which runs something like this:

> "The time has come," the Walrus said, "to talk of many things,
> Of Puppy Dogs and Pussy Cats, of Cabbages and Kings."

and I might cluster round those words my remarks in the few moments at my disposal to-night, particularly those two important words, "Cabbages and Kings." I use them, of course, not entirely in the literal sense, but in the symbolical sense.

In reference to the industry which your delegates represent here to-night, I would like to compliment the members of the Vegetable Growers' Association, those who are dependent for their living on the success of this business, upon their splendid public spirit and the patriotic attitude which they took to the larger campaign which was carried on during the past few years for the more general popularizing of vegetable growing in the back yards of this Province. It was, of course, inevitable that such a campaign should carry with it certain features of competition with those who are engaged for their living upon the growing of vegetables, but the manner in which it was met by the men in the business bears witness not only to their public-spiritedness, but also to their resourcefulness and their intelligence, which enabled them to meet this competition, and still have one of the most successful years in their history. It is inevitable, in fact, it is most necessary, that next year and each succeeding year while the stress of the present situation is upon us and the need for foodstuffs is so great, the call must go out that each individual shall use whatever land is at his disposal, be it large or small, to the very best possible advantage. It cannot be too strongly urged that every ounce, every pound of foodstuff that can be produced should be produced, and we are sure in making that appeal, that the men of the Vegetable Growers' Association, with that same resourcefulness and public spirit will be able to so adjust their crops and adjust their seasons that they will not suffer by reason of the wider popularizing of the growing of vegetables. Popularizing the growing of vegetables, carries with it the eating of vegetables, and we feel confident that the ultimate outcome will be the enlargement of the market to which the men in the business will have to cater in the years that are to come. And so in this spirit we are appealing to horticultural societies, and to all other organizations who can take a part to organize their towns and cities, to organize their villages, to see that wherever any man has a spare hour or two that spare hour is brought to bear up on the spare land at his disposal, that we may grow as much as possible for home consumption, and be able to send the more overseas to those who are in so great need and will continue in so great need, so long as this struggle lasts.

I will conclude with a few words in regard to the reference to Kings. By kings I mean citizenship, because I believe there never was a time in the history of this country when the two words of kingship and citizenship were so inter-

Grown by Hamilton children.

Exhibit of backyard garden products, Hamilton.

changeable, as they are at the present time, and the only kings who will survive after this struggle is over are those who like the revered monarch of this great British Empire fully realize and respect the citizenship of the individual citizen of the Empires over which they rule. It is one of the commonplaces which has been forced upon us during the past three years that our citizenship, after all, is our highest possession, and that it is in the simple but nevertheless essential features of that citizenship that we enjoy life or otherwise, and above all, whether we are gardeners, whether we are farmers, whatever our avocation in life may be, we are first and foremost, citizens, and I thought I could not conclude the programme of your convention better than by simply emphasizing the fact that notwithstanding the problems and the difficulties with which we are confronted from day to day, notwithstanding the extent by which we have by this Convention been able to stay or surmount those problems, we are still citizens of one of the finest countries there is on the face of the globe to-day. We are citizens of an empire which has for three years been engrossed in the greatest struggle the world has ever seen, and can point to the fact that the foot of the invader has never trod its shores. We are citizens of a part of the empire which, while sharing the common burdens, the common sufferings, the common hardships, yet rejoices in the fact that our homes have been free, that, as far as the non-combatants are concerned, we have been permitted to enjoy our life and to carry on our different avocations almost as in other days. These thoughts, therefore, bring to us a realization of our obligation, and I can only hope that this gathering has been the means of accomplishing two great purposes, has enlarged our minds with the knowledge which will enable us to deal better with the difficulties with which we are faced from day to day in our avocations, and has further strengthened our citizenship, strengthened our purpose and determination to meet whatever of service or of sacrifice the remaining years may have in store for us. If we have in any measure been able to accomplish these two aims, we must feel highly elated with the success, and appreciate as the days go by the impetus and the inspiration which is ours. I thank you.

Mr. Davis, the Chairman, then welcomed those present who were not members of the association, after which motion pictures dealing with vegetable growing were shown.

PENNSYLVANIA MARKET GARDENING METHODS.

R. H. Garrahan, Kingston, Pa.

Market gardening is the great American lottery. It is often a case of "heads you win, tails, I lose."

To be successful in this business one should be a good loser; he should be an optimist. A pessimist asks, "Is there any milk in the pitcher," while an optimist says, "Please pass the cream." He is looking for the cream, and he usually gets it. We have our troubles, to be sure; every one has; the manufacturer has his labor troubles and the laborer has troubles of his own. Conditions are such that we will be compelled to make our operations more efficient. We must use labor-saving tools wherever possible and eliminate a lot of the unnecessary risks that we are taking every year.

Farming is not an exact science, and in the growing and selling of perishable produce we must take a lot of chances. We must take our chance with the

weather, with the seed we use, and a long chance on the price we get for our produce. But do we not often take a lot of unnecessary risks? We may be preparing a piece of ground for a certain crop and a few hours' more work would put it in ideal condition, but we are in a hurry and—well, that is good enough, let it go at that. We know the Bordeaux mixture is a fairly good preventive of certain plant diseases, but it looks like rain, and if we put it on, it might wash off. Or we have something else to do and we put it off for a more convenient season: as a result, that celery develops a fine case of blight.

On a great many market gardens there are opportunities for irrigation which are neglected; either a creek, pond or underground water. Sometimes one good wetting at the right time makes the difference between profit and loss. Then, again, we are not always as particular as we might be regarding the source of our seed supply. I have known gardeners to send a list of their seed requirements to different seedsmen, asking for their lowest bid. They were looking for something cheap, and, as a rule, they got what they were looking for.

We have been led to believe that there is something very mysterious about seed production—that vegetable seed could be produced only in certain favored locations. That may be true of some varieties, but I do know that you can raise as good seed of cabbage, tomato, onion, beets or celery as can be raised in any other part of the world. We have been raising, for a number of years, our own cabbage, tomato, sweet corn and celery seed. This year I raised 20 pounds of celery seed on less than one-thirtieth of an acre.

I thought it might be better to tell you something of our crops and methods of growing them, rather than theorize about the business. I have been working in vegetables all my life. As a kid I crawled for miles and miles and miles, on my hands and knees, weeding onions, with the summer sunshine playing tattoo along my back. I know what it is to cut cabbage all day in the rain, or to pull sweet corn with the thermometer at 110 degrees and no air stirring. And I know what it is to get up in the wee small hours of the morning and take produce to market and sometimes sell it for less than it cost to grow it. And yet, after all, there is something mighty fascinating about the business. I would not trade jobs with the fellow in the bank who is locked up in a cage and put under bonds.

We are situated in the north-eastern part of Pennsylvania, in the historic Wyoming Valley. The soil consists of river bottom and varies from a light sandy soil to a heavy clay. We raised this year more than a million early vegetable plants, mostly cabbage, tomato and celery. We had 14 acres in asparagus, 27 acres in celery, 20 acres in tomatoes, 15 acres in early cabbage, 15 acres in onions, 6 acres in sweet corn, 8 acres in beets, 6 acres in spinach, and 2 acres in carrots.

Every market gardener should have at least a small greenhouse and enough sash and cold frames to raise all the plants needed for his own use. The soil used for plant raising should be of a loose, porous nature to allow perfect drainage. Leaf mold is nature's seed bed and probably the best substitute is made of sods and well-rotted manure. We usually put down about a foot of sods, then add one-half foot of manure and so on until we have sufficient for our own needs. In about a year's time the sods will be thoroughly rotted. The pile is then turned and, after the addition of lime, is ready for use.

All our early plants are raised in flats, as we can produce better plants by use of flats than by putting them in beds. We prefer to transplant the seedlings before the rough leaf appears. It has been my experience that we get a more uniform stand of plants by using them when quite young. A little practical

experience is necessary in order to grow good plants. It is hard to say, without being on the job, just when to ventilate or how much water to apply, and watering and ventilating are the important points in plant raising. As a rule, the beginner is liable to coddle his plants too much; as a result he will have a lot of weak, poorly-rooted plants. One should avoid extremes of heat or cold while the plants are young, aiming to develop a slow, steady growth.

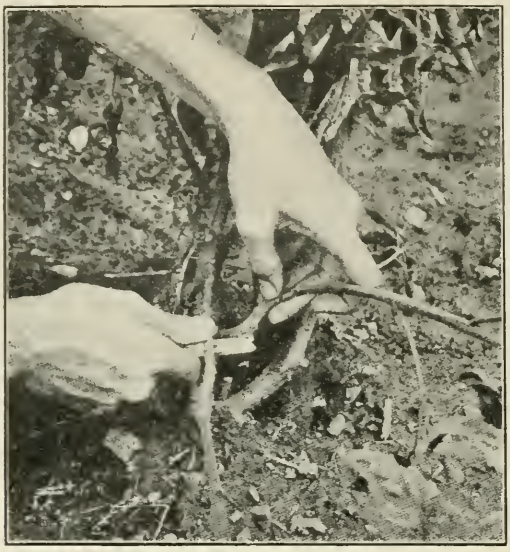
The greatest loss in plant raising is caused by the damping-off fungus. This disease usually attacks the seedlings, causing the stems to turn black and rot off. Since using sterilized soil we have had little trouble with this disease. The plants are left in the greenhouse until they have struck root; they are then shifted to cold frames. Most of our frames are steam heated, which has proved perfectly satisfactory and is much cheaper than protection by straw mats.

There is no better test of one's ability as a market gardener than the quality of the plants he raises. If he is painstaking enough to grow a supply of strong, healthy plants, it is a safe bet that his field operations will be equally successful.

The asparagus we grow is the Palmetto variety. It is planted two by four feet and five or six inches deep. Success, to my mind, depends upon the selection of a well-drained soil supplied with abundant plant food, and the use of well-grown plants from high-grade seed. It is a mistake to start an asparagus bed on poor ground. The future of the bed will depend a great deal upon the conditions of the soil when the field is set. If possible, choose a field where onions, or a similar crop have been raised for a few years. Asparagus is a crop that requires heavy feeding. Before the war we supplied a ton of 6-8-10 fertilizer per acre, part of the nitrogen in the form of nitrate of soda, the balance in tankage. The fertilizer is applied early in the spring, just before the first shoots appear. About every third year we apply a heavy coating of manure after the cutting season. After the cutting season the field is thoroughly disk-harrowed; and at the last cultivation, when the asparagus is laid by, it is again ridged up. In the spring these ridges are cut down by the use of a ridging cultivator. For this purpose the disks are put close together on the cultivator and arranged so as to throw the dirt between the rows; the small plows are fastened behind the disks. This arrangement levels the ridge and leaves the surface over the row free from weeds and stubble.

Both early and late onions have proved profitable with us. There is no crop that responds more readily to decent treatment. It pays to put the ground in good shape for all crops, but with onions it does not pay to plant them unless the land is first put in the best shape. Under most conditions I think it would be preferable to manure the ground in the fall and plow just before the ground freezes; then in the spring prepare the ground with Cutaway, Acme, and Meeker harrows. As our land is liable to overflow from the river, we prefer to plow in the spring.

Before plowing, the ground is gone over two or three times with a four-horse Cutaway. We are able to stir up the soil with the Cutaway when it would be entirely too wet to plow. The action of the Cutaway loosens the surface of the soil and allows the air and sun to penetrate, thus permitting us to plow a week or ten days earlier than we otherwise could. A few days after "cutawaying," depending upon the condition of the soil, the field is worked over with an Acme harrow to break up any lumps that may have formed. After plowing, thirty or forty tons of well-rotted manure are applied per acre and worked in with the Cutaway harrow. The ground is then harrowed over with the Acme and plank-drag until it is in the best condition. The finishing touches are then put on



Trimming side shoots off tomato plant.

Celery plant in seed.

with the roller and Meeker smoothing harrow. Time spent in preparing land for onions, or any other crop, is not wasted. Some people have an idea that if land is plowed and harrowed over, it is fit to plant.

If the ground is very dry at the time of sowing, we roll down the rows after seeding with a heavy four-inch iron wheel, rigged up something like a wheelbarrow, in order to firm the soil over the seed. This takes the place of "the use of the feet in sowing," as advocated by Peter Henderson a generation ago. About five pounds of seed is sown per acre, depending upon the percentage of germination. We have been raising the Southport Yellow Globe and Ohio Yellow Globe. They are both good varieties. We have tried two makes of weeders, but as long as we can get Polish women at $1.25 and children at 60 cents per day, I believe we will stick to the hand work.

For early onions we use sets, the so-called "new method," which consists of using plants started in a hotbed, having proved unsatisfactory. We find it important to grow our own sets, as the commercial sets are very often raised from inferior seed. Yellow Strasburg, a small flat onion, is generally used by the growers in production of sets, as a flat onion always makes a better shaped set, whereas the globe-shaped onion will produce one that is bottle-shaped. As appearance is not what we are after, we use the same variety and the same grade of seed in the production of large onions.

We also grow considerable Prizetaker sets. This variety matures about two weeks later than the Southport Yellow Globe, but will yield a much larger crop. We have found the Prizetaker just as easy to grow and as good a keeper as the ordinary variety of onions. About fifty pounds of seed per acre is used. This is sown as early in the spring as possible, on well-enriched, sandy soil. When the onions begin to mature, they are pulled and laid on the ground for a few days to dry. They are afterward picked up, part of the top twisted off and stored in shallow, slat-bottomed crates. In planting the sets we often skip every third row. These skipped rows are afterwards planted with celery. The yield per acre is usually less than from seed, but the price is often higher and the onions are out of the way for a later crop.

Early cabbage has always been one of our standbys. It is a comparatively cheap crop to grow. Some years we have to sell it at rather a low figure, but, one year with another, it is a money-maker.

We have settled on three varieties—the Wakefield, either Early or Charleston, Copenhagen Market and Glory of Enkhuizen. They make a combination that is hard to beat. We make the first sowing of cabbage seed about the middle of January. The early varieties are transplanted in flats, 2 inches apart. The later varieties we set one and a half inches apart. Cabbage is a rank feeder and requires well-prepared soil and heavy fertilization. To my mind, there is no room in a cabbage patch for lettuce or radishes, or any other inter-crop. If possible, we prefer to have the ground intended for cabbage sowed to rye the fall previous. Before sowing the rye we apply about one and a half tons hydrated lime per acre. We have had less trouble with wire-worms where we have plowed under a heavy growth of rye. The cabbage plants are set two and a half feet apart. The Wakefield varieties are set fifteen inches apart and the Copenhagen and Enkhuizen eighteen inches apart in the row. Early cabbage should not be set deep; keep the roots near the surface where the ground is warm. The early varieties, which are grown two inches apart in flats, are cut out with a knife in order to retain all the soil possible and are planted by hand. We never use a dibber in setting cabbage plants. A few days after planting we apply a small

amount of nitrate of soda around each plant, from 100 to 200 pounds per acre. The after-treatment consists in keeping the field well cultivated and hoed often enough to keep the soil loose around the plants.

When the cabbage is ready to cut, a row of barrels is placed through the field every twelve rows. Two men cut the heads, each man cutting six rows. As the cabbage is cut, they toss the heads to another man or boy, who places them in the barrels. The filled barrels are hauled out with wagons. Some heads are destroyed, especially when turning the ends, but the loss is nothing in comparison to the expense of carrying the cabbage out by hand.

Tomatoes are an important crop with the market gardener. As the early tomato produces greater returns per acre, it is the one that receives more attention from the grower. The condition of the plants at the time of setting has a great deal to do with the profit of the crop. The plants should be about ten weeks old when set in the field. I would rather have a plant that is showing bud nicely than one that is in bloom. Tomatoes should be transplanted at least twice before they are ready for the field, the idea being to develop a stocky plant. This can be accomplished better by withholding water than by exposure to low temperature. A stunted tomato plant is worthless. An over-supply of nitrogenous fertilizers will prove detrimental; it will force top growth at the expense of the fruit. On many market gardens, where the area is limited and the soil has been receiving heavy applications of manure and fertilizers, it becomes necessary to stake and prune the vines. Staked tomatoes produce the bulk of the crop earlier and the fruit is smoother and less liable to crack, but they are more likely to suffer from drought. Where one is making a specialty of staked tomatoes, it is important to have facilities for irrigation at the critical time. All the large growers that I know of have developed a strain of tomatoes that they consider the best in the world. I believe they are right. After a few years of careful selection one has a type that is peculiarly adapted to his local environments. We use Earliana and Chalk's Jewel. Earliana has proved the money maker with us. Chalk's Jewel is used for later crop.

Celery is another of our hobbies. For early celery we use White Plume. The quality is poor, but consumers down our way are willing to pay good money for it early in the summer. It is a rapid grower and is not nearly so liable to heart rot as most other varieties.

There is a variety that has been on the market for several years that, as it becomes better known, will take the place of White Plume and Golden Self-Blanching. This variety originated with a Mr. Meisch, of New Jersey, and was first sold by a seedsman of Woodhaven, N.Y., as "Meisch's Green." Later it was offered by Francis Brill as "Sanford." Then Henderson took it up and offered it under the name of "Easy Blanching." Most seedsmen have it listed now, each one calling it by a different name. This is a remarkable celery in many respects, a strong, vigorous grower, with a compact heart; it will bleach as quickly as White Plume or Golden Self-Blanching, is almost blightproof, and the quality is superior to any other early variety. Another desirable feature is the fact that it is a fairly good winter variety and if put away green will keep until spring; in fact, one of our Philadelphia seedsmen offered it this year as a new late keeping variety. There have always been two types among this celery, at least ever since I have known it. The one type has long stems and bleaches up white; the other type has shorter stems and bleaches up with a yellow heart. Last spring we received some seed from Farrel Brothers, Philadelphia market gardeners, who have been saving their own seed of this variety for a number of

years and have been selecting for seed purposes only those specimens which show a yellow heart. As a result, they have to-day the best strain of this variety in the market. There is one undesirable feature about this celery—it will very often get pithy when stored for winter, especially if the weather is warm after trenching. We have found that, if trenched as late as possible in the fall, it will seldom turn pithy.

We have tried at one time or another, practically all the different varieties of celery that have been offered. Golden Self-Blanching is not adapted to our conditions; it will heart-rot in hot weather and get pithy when trenched. Columbia is a celery of superior quality, but a poor keeper, and more liable to rust than any variety I know of. Winter Queen is a good reliable celery, one of the best known late keeping varieties. The only objection I have to it is that it does not have

Montreal market melon weighing 17 lbs.

a full heart; quality is fairly good. Winter King is probably a selection from the Winter Queen. It bleaches out with a yellow heart and is very popular among the Philadelphia growers. The Giant Pascal probably heads the list in regard to quality, but with us it is a poor keeper and on account of extreme brittleness is more expensive to handle.

French's Success, introduced a few years ago by the Joseph Harris Seed Company, is one of the most uniform varieties of celery we have ever handled. It is a slow-going, compact variety and should be planted earlier than some of the taller growing kinds. It is the best keeping variety we have ever tried, and is very full hearted. I have counted as high as fourteen shoots starting in the heart, while in the Giant Pascal only two or three would be visible. The quality is good, but not equal to Giant Pascal. We have found this variety best adapted to our conditions.

The seed for the early crop is sown about March 1. I prefer to sow celery seed in solid beds rather than in flats. The soil is sterilized by saturating it

with a solution of formaldehyde, 2 quarts to 50 gallons of water. And, on the principle of "making assurance doubly sure," we sterilize the seed by washing it in a solution of 2 ounces copper sulphate to one-half gallon of water. When the rough leaf appears, the seedlings are transplanted one and a half inches apart in flats and are kept in the greenhouse until they begin to grow nicely. Before being shifted to the cold frames they are given a thorough spraying with Bordeaux mixture and also sprayed two or three times while in the frames. Celery plants should be kept growing nicely, without a check; ventilate freely and avoid too much water. Do not attempt to harden them as you would cabbage plants, but treat them more as you would tomato plants. They are not set in the field until the latter part of May or the first of June.

When the celery is large enough to bleach, the boards are hauled in the field, two adjacent rows are put up, then we skip four or six rows, put up two more and so proceed. When the celery is bleached, the boards are taken down and put up to the adjacent rows. Before the war we used the following fertilizer per acre: 400 pounds nitrate of soda, 600 tankage, 600 acid phosphate, and 400 potash.

It is customary to plant late celery after some early crop, as beets, cabbage or spinach. But where land is available, or where irrigation has not been installed, it is a good plan to plow the land intended for late celery as early as possible, and harrow it over occasionally in order to kill the weeds and conserve soil moisture, similar to the dry farming of the west. With this method we lose the use of the land early in the season, but are almost sure of a good crop of late celery. And one good crop sometimes pays better than two poor ones.

The plants are set six inches apart and rows three feet apart. Celery should be cultivated almost constantly and the cultivator run quite deep early in the season while the plants are small.

Along in the latter part of September we begin to bank or hill up the celery. If the celery is small, it is first necessary to handle it, but if it is a foot high, all that is necessary is to loosen the soil between the rows with a cultivator and follow up with the celery hiller. We commence trenching the latter part of October, or first of November, depending upon the weather. Trenches are dug about a foot wide and deep enough so that when the plants are placed in the trench, the tops will stick out about two inches. The celery is dug up by an attachment similar to an onion set harvester, which is fastened to a two-horse cultivator. The celery is then pulled out, all the dirt possible is shaken from the roots and a few of the outside leaves pulled off. It is then carried to the trench where it is packed in firmly in an upright position. The boards used in blanching the early crop are nailed together "V" shaped and placed over the trench to keep out the rain and prevent the celery from drying out too much. After severe cold weather sets in, manure is spread over the boards to keep the celery from freezing.

A great many growers make the mistake of trying to raise everything in the catalogue. We have found it a better plan to raise a few different kinds and hit them hard. Find out what crops are adapted to your particular soil and then go to it. Try and arrange your crops so they do not interfere with one another, either in the growing or selling.

The reason many growers fail to get a decent price for their produce is the fact that they do not ask enough. If you once get the reputation of being cheap, it is a hard matter to get a good price.

CARING FOR SPRING TOMATOES.

C. W. Waid, Lansing, Mich.

In the first place, for good results, tomato plants set out in a greenhouse should be large and stalky. If they have set buds, so much the better. Plants which have been given plenty of room and which have grown steadily and rapidly from the time the seed was sown until transplanting has occurred, will be more satisfactory than any which may have been checked in growth at any time during the period of development. The time at which plants are set in permanent beds will govern to a greater extent the time of maturity of the crop than the time at which the seeds were sown. Plants set in the greenhouse the first of March will usually produce the first ripe fruit about the end of May. As the prices at which tomatoes sell are much higher before outside tomatoes in the same locality are placed on the market than after this occurs, it is important to have the crop in the greenhouse mature as early as possible. As a general rule, however, it has not been found advisable to place plants in the permanent beds in the greenhouse before the first of March in latitudes as far north as central Ohio and north.

While tomatoes can be transplanted more easily and with much less danger of bad results in the greenhouse than outside, it is advisable to take considerable pains in making the transfer. If the plants have been grown in any form of container which will permit a considerable amount of dirt to be moved with the plants, there will be less check in growth than when the plants are taken from the solid bench and most of the dirt removed from the roots in the operation.

The soil should be in good workable condition when the transplanting is done, and care should be taken to firm the soil well around the roots of the plants. The plants may be set at a considerably greater depth than that at which they grew in the seed bed. They should at least be set deep enough to enable a good, strong root development to take place. If the greenhouse is equipped with an overhead irrigation system, it is a good plan to give a thorough and heavy watering immediately after the plants are set. If some other form of watering is required, care should be taken to supply the soil in the immediate vicinity of each set of roots with an abundance of water. For a short time after the transfer has been made, unless the plants have been started in pots or similar containers, the roots cannot reach out very much for water, and, as a consequence, may suffer because of lack of sufficient moisture close at hand.

In some cases it may be advisable to place a little commercial fertilizer about the plants at the time of transplanting. This will depend, however, on the amount of available plant food in the greenhouse soil. If a heavy application of manure has been made some time during the season and the cropping has not been so heavy that the plant food has been greatly exhausted, it is not necessary or advisable to add more plant food when the plants are transplanted. However, after three or four lettuce crops have been grown since the manure was added in considerable quantity, it might start the plants off better to have a little nitrate of soda, dried blood, or some other form of nitrogen placed where the plants can readily make use of it. If the nitrate of soda is used, however, it should be used very sparingly and with much care to avoid having it too strong near the plants. It is very easy to burn the tender plants with this form of nitrogen.

Most of the growers place the supports that they are going to use for the vines in position immediately after the plants are placed in the beds. It is

harmful to allow the tomatoes to grow until they lop over. Whatever form of support is used for the plants, they should be in place early enough, so that the plants may be tied to them or fastened to them before any lopping over has occurred. With the proper temperature and moisture supply, the tomato grows very rapidly, and it only takes a few days after transplanting, if the conditions are right, for the plants to get tall enough to fall over easily.

It is important to have the temperature in the house kept high for the tomatoes during the early part of the growth of the plants. Of course, under present conditions, with the scarcity of coal, some of the growers will be disposed to run the temperature low. However, a night temperature of 60 to 65 is preferable to a lower temperature. Tomatoes may be grown at a temperature running as low as 50 at times, but of course, growth is much retarded. The day temperature may run as high as the sunshine and weather forces it, provided there is a certain amount of ventilation given at the right time.

Some growers water their plants at frequent intervals, and not very heavily each time, but the majority prefer to give a heavy application less frequently. One thing should be kept in mind, that the plants should not be allowed to suffer for lack of water, at least to such an extent that they begin to show a tendency to wilt. Under such conditions a certain amount of checking occurs and, as has been previously stated, a uniform, regular growth of the plants is desirable.

SOAKING SEEDS BEFORE PLANTING.

A. E. Wilkinson, Toronto.

It was a custom among old-time gardeners to soak seed before planting. I well remember that as a boy on visits to my grandfather early in the spring I almost always found him soaking early garden peas or corn or some other seed. The practice is not so common now; perhaps this is due to lack of knowledge of the reason for, or the method of soaking seeds.

The principal reason for soaking seeds is the gain of time between seed and harvest. This gain is brought about because, by soaking, the seed takes in moisture enough to start its first processes of germination. Placed in a congenial soil, it very quickly pushes above ground, often three to ten days earlier than dry planted seed. The harvest is generally reached earlier. The same water action may take place in the soil, wherein the seed absorbs water from the soil particles, but the process requires a longer time and therefore delays harvest somewhat.

Seeds should not be soaked and then placed in a very wet or cold soil, because the chances for the decay of the seed are greater than growth under such conditions. Therefore, careful consideration of the outside environment, soil, climate, etc., should be made before seeds are soaked. Timeliness is also important. Start seeds just slightly before they would naturally be planted outside. The methods of soaking seed are many.

The first method is that of placing seeds in lukewarm water overnight and planting in the garden the following morning. Seed of peas, beans, radish, corn, cucumbers, squash, etc., can be treated in this way, each sort in a separate receptacle. Under no circumstances should the seeds be soaked by this method until the seed coat is loose and comes off, because the future of the seed would

probably end before planting. The seed coat holds the interior parts together, and it must perform this office until the seed parts push out naturally.

Another method is that of making a paste of the seeds. Celery, lettuce, cabbage, cauliflower, etc., can be used. The paste should be spread in a thin layer along the middle of a woolen or flannel cloth. The edges of the cloth are then turned in and the cloth is rolled up. Six, eight or more sorts can be placed separately on a long cloth. The roll is then placed in lukewarm water for five to six hours and then taken out and kept in a temperature of 60 degrees. Twelve hours later it is again placed in the water for two or three hours, then taken out and aired as before. The operation is repeated until the seeds begin to sprout, requiring from three to ten days. The seeds are then dried slightly and immediately planted in the garden.

Cauliflower seed pods.

The third method consists of mixing seed and soil in certain proportions. The soil should be fine, preferably sandy. With celery use one part seed by bulk to ten parts soil; radishes, one part seed, six parts soil; lettuce, one part seed, five parts soil, etc. The amount of soil used would depend on the percentage of vitality of the seed, high percentage needing more soil, low less soil. It also depends on the rate of planting desired. If a thick stand is wanted, use less soil, light stand, more soil. The soil and seed are thoroughly mixed together and placed in a box. Moisten the soil and cover the top of the box with wire cloth or netting. Place the box in a temperature according to the germination requirement of the seeds to be soaked. Moisten the soil each day as needed. Stir the soil-seed mixture each day. When seeds have sprouted, plant in garden, being careful to place soil over them carefully with not too much pressure.

EXHIBITING VEGETABLES AT FAIRS.

The market gardener, if he wishes to be successful, must carefully lay out his plans well in advance. To some, Exhibition time may seem far away, but it is only the matter of a few short weeks before the busy season is once more on us, and, therefore, some hints on exhibiting vegetables will not be out of order.

There are several things to keep in mind when putting up an exhibit. One of the first is to be sure that the variety is true to name. Every exhibitor should be well posted on varieties, because one of the benefits which should be derived from exhibits at fairs is educational. When experts are employed to judge, all varieties wrongly labelled should be given their proper names, but, as a rule, those wrongly named should not be awarded a prize. Oftentimes varieties shown are not worthy of a prize.

A second most important thing and one that carries great weight with expert judges, is that the vegetables exhibited should be as uniform in size as possible. Uniformity counts for much in a vegetable exhibit. They should not be extremely large (unless the prize is offered for large specimens) nor too small. Lack of uniformity has caused many otherwise good exhibits to be turned down by the judge. When selecting vegetables for exhibition, pick out many more than are needed, and go over these, rejecting the poorest, until you have only the best left. Extremely large size usually indicates poor quality.

The shape should be regular and typical of the variety. Roots and potatoes should be smooth and free from protuberances. Regular shape is almost as important as regularity in size. It is very difficult to select a dozen specimens of any vegetable which will be uniform as to size, if they vary a great deal in shape. A long carrot should not receive a prize if it is entered as a variety which naturally grows short. Neatness and cleanliness are also very important. Your exhibit may be uniform in size and true to type, but if they are shown in a dirty condition or arranged in a haphazard way they will fail to make the impression on a judge that they otherwise might have done. Directors of fairs and exhibitions should furnish the baskets or utensils in which vegetables are shown so that there will be complete uniformity in that respect. If the containers are of various sizes, and some of the vegetables are shown in large baskets, some in small, and others in boxes, much of the educational effect is lost on the spectator. With uniform packages the vegetables can be so arranged as to be attractive. When the tops of roots are shown with the roots, their appearance is enhanced by tying them together with a narrow ribbon of a suitable color.

Be sure that your vegetables, when shown in baskets or boxes, are of the same quality and size all through. Experienced judges take samples from the middle and bottom of the box, and an exhibit of good vegetables on top and inferior ones at the bottom will be turned down at once. Honest packing pays whether for market or exhibition.

Always have the name of the variety printed or clearly written on a card, so that it can be easily read by those interested in the exhibits and in search of information. Consumers require education as to varieties, and at what better place can they acquire this than at an exhibition where everything is tastefully arranged, and information as to names and varieties clearly set out for everyone to see?

EARLY POTATO SEED SPROUTED.

Potatoes can be procured from two to three weeks earlier than normal by placing the seed potatoes in full sunlight about a month earlier than it is customary to plant potatoes. This would be about the middle of April. These potatoes will then produce short, thick dark green sprouts that are very tough. At planting time each seed piece should contain at least one of these clusters of buds. The pieces should be planted carefully with the buds upwards. It will require only half the time or less for plants to come to the surface of the soil from sun-sprouted seed than from normal dormant seed potatoes. The potatoes will thereby be able to make a very good growth during the cool part of the year before the excessive heat of summer. Potatoes which sprout in the cellar producing long white tender sprouts should not be used for seed purposes, as they will give poor results. Potatoes of an early variety like Irish Cobblers and Early Ohio should be used to secure best results.

VEGETABLE GROWING IN NEW JERSEY.

L. G. Schermerhorn, New Brunswick, N.J.

New Jersey is a State where all kinds of vegetable crops are grown on both an extensive and intensive scale. It is one of the smaller States, but her products are well known for their quantity and quality in all of the large eastern markets.

The northern half of the State is rolling and hilly; the southern half resembles Delaware and the Maryland peninsula. The soils in this part of the State range from clay loams to the lightest of sands, offering ideal conditions for the growing of all vegetable crops from celery to sweet potatoes.

In 1909 the total acreage of vegetables in New Jersey was 181,722 acres (including potatoes and sweet potatoes) and their value was estimated at $14,073,467. Exclusive of potatoes and sweet potatoes the vegetable products were valued at $7,566,193. To further illustrate the importance of the vegetable industry in New Jersey, 34.9 per cent. of the total value of all crops in 1909 was realized from vegetables.

Of those vegetables produced in New Jersey the most prominent are tomato, sweet corn, asparagus, peas, cabbage, cantaloupe, green beans, watermelon, pepper, eggplant, sweet potatoes.

In addition to growing many vegetables for marketing in the fresh state, New Jersey also has quite an extensive canning industry. The industrial directory for 1915 lists 53 establishments as canning fruits and vegetables. Seventeen of these were in Salem, and sixteen in Cumberland Counties. Recently a questionnaire was sent out by the State Horticulturist, and of 21 replies all but one report the canning of tomatoes in some form or other. The other crops chiefly canned are peas, beans, sweet potatoes, squash, and asparagus.

Another line of horticultural endeavor carried on in New Jersey is the production of vegetable seeds. Several large seed firms have farms where seed is grown and tests made. The principal seeds produced on a commercial basis are pepper, eggplant, tomato, spinach, sweet corn and melons.

While mentioning the subject of seed growing it may be of interest to some to know that a number of our New Jersey gardeners are growing their own

Easy blanching celery seed. Variety originated by S. Meisch, Secaucus, N.J.

A typical New Jersey market garden.

celery, lettuce, carrot, melon, tomato, pepper, eggplant, spinach, and turnip seeds successfully.

The gardening operations in northern New Jersey are quite different from those carried on in the southern part.

In Warren, which is one of the northern counties, there are several hundreds of acres of muck land on which large areas of lettuce, onions and celery are grown. This district is known as the Great Meadows.

The principal market gardening areas in northern New Jersey outside of the Great Meadows are in the vicinity of Newark, Paterson, New York and Jersey City. In one section, in which might be included Richfield, Brookdale, Arlington and Nutley, there are probably at least 150,000 sash used on cold frames throughout the year. Each gardener has 2,000 to 3,000 sash in addition to his 10, 50 or 60 acres of ground. The principal crops grown in the frames are dandelion, parsley, lettuce, carrot, spinach, corn salad, endive, witloof chicory, etc. In the fields the greens, salads, celery, roots, cabbage, cauliflower and parsley make up the list of the more important crops grown. Nearly all of these intensive gardeners have irrigation in the form of the Skinner system.

Travelling south until we reach Monmouth County we begin to see what is meant by the term trucking. The main crops in this section are white asparagus, peppers, eggplants and tomatoes. The products from these farms are shipped for the most part to New York, or to nearby shore resorts. Still further south we come to Burlington, Camden, Gloucester, Salem and Cumberland Counties, all of which may be called great truck growing sections. The one great crop is tomatoes, both as an early market crop and as a late one for canning. Other crops of importance are early garden peas, beans, peppers, sweet potatoes, green asparagus, sweet corn, melons and eggplants. The crops from these counties go mainly to Philadelphia and some to New York and Boston.

Two of the greatest problems with New Jersey gardeners to-day are the labor and manure shortages. Many of the New Jersey truck growers are using green manures in place of stable manure and find that it gives very good results. A few market gardeners have given attention to green manures and while they find it gives good results, their greatest difficulty is to work the green manure crop into their cropping systems. How the shortage of labor is to be met is still an open question, but in many cases it will be necessary to utilize the school boys and the women to meet this emergency.

THE HANDLING AND MARKETING OF ONIONS AND CELERY.

A. H. MacLennan, O.A.C., Guelph.

These two crops are two of our standards in the Province, and while the handling and marketing of them is probably as familiar to most of you as they are to me, I will describe a few of the methods I have seen in various sections of the continent.

Onions.

This crop in some sections is raised entirely from Dutch sets, and is harvested the latter part of August. When the tops have died down they are lifted and the tops removed; the bulbs are then put over the grader, which is a frame with

slatted bottom, the slats being set from one to one and a half inches apart, and are moveable. The onions are poured over this, and all the small ones and extra leaves drop through. The crop is generally marketed in a mosquito netting bag, or a bushel and a half hamper, as most of it is shipped to nearby markets. Very little of this crop is stored, because, as a rule, it does not hold well in storage. As this crop is frequently grown as a companion crop to late celery, it makes a very paying enterprise.

Onions grown from seed are handled in very much the same fashion in the field, but they are stored for a time in a crib, which looks very much like a corn crib, having slatted sides. In this they are allowed to dry out more fully for a month or six weeks before they are put on the market. In other cases they are put in slatted bushel boxes piled one on top of the other with inch strips at the end to keep them farther apart, and thus allow for a very free circulation of air. If onions are to be held any length of time in storage, it is very necessary that

Well-formed berries.

they be thoroughly dried, and that free circulation of air be available at all times to all of the bulbs. The greatest difficulty found in storing onions in crates is that the bulbs in the centre sweat, and in that way start to rot.

The temperature should be kept as near as possible in the storage at 38 to 40 degrees, and dry, with good air circulation. Most of these onions are put on the market later on in the mosquito netting bags, as this type of bag tends to keep them in better condition, especially if they are to be shipped to any distance. Most of the growers in the large onion sections sell the greater part of their crop to the storage man, who holds it and ships out according to the market.

Celery.

This crop is one of the most difficult to handle or store, as injury quickly develops into rot. For the early crop most of it is sold locally, the plants being trimmed of their roots, making a comb-shaped end. The stalks are tied in bundles of 3, 6 or 12, according to the market demands. Last fall on the Newark market in New Jersey celery was sold in bundles of three with very little blanching, because

of the great demand. In most of these sections, whatever outside leaves are removed are tied together in bundles of about the size of a celery stalk, and are sold for soup-making purposes. In this way no waste of any amount is permitted.

Late celery is frequently sold in bulk to a dealer who puts much of it in storage; all of the roots and outside leaves are left on the plant, and it is shipped in crates 24 by 24 at the base. These crates hold from six to sixteen dozen depending on the grade. This is shipped in refrigerator cars, and held in the cold storage until the market demands it, when it is trimmed of its roots and outer leaves, and shipped. For local markets most growers put into storage, transplanting the plants from the field into the soil of the storage-house and holding it there, taking out each week what their market requirements can handle. Where celery is put in storage it is better to have no other crop there, as the moisture given off other plants very frequently starts disease. The plants should be kept between 32 and 34 degrees, and supplied with moisture until needed. Where one has been troubled with blight, it is well to spray thoroughly just before lifting from the field with Bordeaux mixture, or the dried sulphur dust.

Up-to-date asparagus growers find that selling is one of the most important factors in getting profitable results, and that the use of colored tape helps in marketing their crop. It has been proven conclusively that tape will not bruise or harm the stalks, even when the bunches are tied indefinitely.

The Convention then dispersed after singing the National Anthem.

Ontario Department of Agriculture

ANNUAL REPORT

OF THE

Corn Growers' Association

1917

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1918

Printed by
THE RYERSON PRESS

To His Honour Sir John Strathearn Hendrie, C.V.O., a Lieutenant-Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I have the pleasure to present herewith for the consideration of your Honour the Report of the Corn Growers' Association for 1917.

Respectfully submitted,

WILLIAM H. HEARST,

Minister of Agriculture.

Toronto, 1918.

ONTARIO CORN GROWERS' ASSOCIATION

OFFICERS FOR 1917-18

Honorary President ..... R. W. Knister, Blenheim.
President ..... Lester Gregory, Chatham.
First Vice-President ..... L. D. Hankinson, Aylmer.
Second Vice-President ..... Walter Anderson, Amherstburg.
Treasurer ..... J. H. Coatsworth, Kingsville.
Secretary ..... P. L. Fancher, Chatham.
Superintendent ..... Harry Smith, Ruthven.

DIRECTORS

Norm. Dumouchelle, Windsor, No. 1.
A. Ouelette, Walkerville.
Fred I. Ure, Maidstone.
Hubert Wilson, Maidstone.
B. R. Cohoe, Woodslee.
O. D. Gagnier, Comber.
F. G. Breen, Comber.
Fred Pettypiece, Auld.
Jas. Martin, Amherstburg.
Jno. Gould, Essex.
Jno. Arner, Arner.
Ray Jackson, Cottam.
Jno. Pierce, Staples.
Thos. Heatherington, Wheatley.
A. L. Shaw, Tilbury.
J. B. Rhodes, Chatham.
A. R. Everitt, Chatham.
David Wilson, Ridgetown.
Geo. Newman, Muirkirk.
Earl Montgomery, Dresden.
Frank Weaver, Turnerville.
Harry French, Dresden.
Dan Buchanan, Thamesville.
Jno. McCrae, Pt. Lambton.
Clement White, Mooretown.
J. C. Benner, Alvinston.
Stewart McDonald, Pt. Lambton.
Wm. McCutcheon, Glencoe.
Stewart L. Pearce, Wallacetown.
Howard Zavitz, Ilderton.
R. H. McLennan, Aylmer.

FINANCIAL STATEMENT TO SEPTEMBER 23, 1918

Receipts.		*Expenditures.*	
Balance from last year	$ 85 37	Cash paid in prizes	$957 75
Legislative grant	500 00	Directors' expense	233 85
Essex County grant	250 00	Advertising	100 34
Kent County grant	250 00	Printing and stationery	352 71
Municipal grants	380 00	Judges' and lecturers' expenses	126 75
Gate receipts	419 55	Postage	18 60
Membership fees	65 00	Expense of evening entertainment	23 00
Space sold	135 00	Cotton grain sacks	9 00
Advertising in prize list	228 00	Livery account	15 00
Donations	43 50	Lumber, nails, etc.	7 73
Building for show and other expense furnished by City of Chatham (estimated)	250 00	Cleaning and engraving cup	16 75
		Corn lost at corn show	7 50
		Corn purchased for decorating	5 97
		Eastern Passenger Association	19 50
		Express	52 91
		Exchange	7 53
		Stenographers	42 50
		Janitor	15 00
		Auditors	8 00
		Treasurer	50 00
		Building, etc., furnished by Chatham	250 00
		Sundries	4 00
		Balance on hand	282 03
Total expenditure	$2,606 42	Total receipts	$2,606 42

B. A. Smith,
P. C. Fox, } *Auditors.*

Ontario Corn Growers' Association

ANNUAL CONVENTION

The Tenth Annual Convention and Exhibition of the Ontario Corn Growers' Association was held in the Armouries, Chatham, on February 12-15, 1918.

The number of entries was much smaller than in previous years, due to the unprecedented bad season for the maturing of corn in 1917. The quality was only fair, many of the exhibits showing lack of maturity.

In spite of this there was an excellent display of corn.

The attendance was much larger than the previous year—and even larger than was expected. This showed the keen interest of the public in the work of the Association. It also clearly emphasized the interest in the seed corn situation.

This year's Exhibition clearly evidenced the work of the Association. Practically no other good corn, fit for seed, was exhibited by anyone who had not been a member of the Association.

SEED CORN SITUATION.

P. L. Fancher, Secretary O.C.G. Association, Chatham.

This year is an abnormal year. Normally the seed situation in Ontario has never created any great anxiety in regard to corn. The situation as we have known it in Ontario for the last three years, particularly this year, due to weather conditions, is not peculiar to Ontario alone but is the condition which exists all over North America. If you should go into Michigan, Ohio, Wisconsin, Iowa or Illinois, or any great corn-belt States, even down into Nebraska and Missouri, as far south as those States are, you will find a condition which has never existed in any year in the history of America before. At a meeting in Washington some few weeks ago, which Dr. Zavitz and other representatives from Canada attended, in reviewing the seed situation with the seed dealers, seed merchants, and with the Government men in the United States and Canada, if there was just one motto that could be written across this question it might be one running somewhat like this: A National Calamity." But perhaps that is putting it a little strongly. But I wish to use that phrase in impressing on you that the corn situation in America to-day is not as bright as we could wish it to be, and yet, at the same time, is not particularly disastrous.

When a person is put face to face with bad conditions, and has to begin to figure his way out of that situation, you can usually find circumstances which will offer themselves, as under the present conditions, to alleviate the situation; and such has been the case. When the United States was face to face with this question and recognized a seed shortage—and she has a large area devoted to the production of corn, and a large proportion of this area is devoted to the production of shelled corn, or, as we speak of it, corn for husking, and a large proportion to the growing of ensilage—they took up the question of whether it was advisable to plant only the acres devoted to the corn for husking where it is particularly adapted to their conditions, with the result that where a man has twenty acres of corn, ten acres he intends for a silo and ten acres he intends to grow for husking,

and he has the seed for the twenty acres, he may be asked to plant the ten acres which he intends to plant for ensilage purposes with seed from farther south, and the corn which he has grown and saved on his own farm be sold at a reasonably just price to his neighbor who is not so fortunate as to have his supply of seed corn for the ten acres he intends planting for husking purposes. In that way they are meeting the seed situation to quite an extent. We are not so favored in Ontario. We are on the northern limit, we might say, of the Seed Corn producing area of the American continent, and in that respect we come into contact with climatic conditions which do not exist to the same extent farther south. And just let me review here the temperature for a period of eighteen years in comparison with the past season of 1917. In looking over the records for five months, May to September inclusive, and taking the average for eighteen years, we find that 1917 was a colder summer than the average for the previous eighteen years. Corn is a warm weather plant. The days and nights when you growled about the heat, when you growled because there was not quite enough rain and you were afraid the corn was going to dry up—you know these conditions—you will remember that was the very time corn was standing straight up and the ears were shaking hands across the rows. Corn likes warm weather, and we did not have it in 1917. Further than that, the condition in the spring of 1917 was such that the average acres of corn were not put in on record time. It was too cold and too wet. The season was so cold that the growth did not proceed as fast as was expected. That threw the corn some weeks behind in its early growth, and fall conditions were not as conducive to the harvesting of a crop as we normally expect. When the middle of September came, and you went out into your field to pick your seed corn you found that the corn was in the milk or dough stage, and a little later the cold weather came. Corn was not fully matured, and that which seemed to be fully matured contained so much moisture that it did not get fully dry. The conditions were such that it could not thoroughly dry down. The large percentage of water in the corn was not driven out by the warm dry days in the fall. Then what came? Labor was scarce and you did not get the corn in with the rush you intended. It stood out in the field (a great deal of it is standing there yet). The corn that was brought in was put away, racked up, much of it peg-dried, some of it put under verandahs where the sun could dry it, some put in houses constructed for the purpose, so that the air could get through it. But in spite of all this the weather conditions were such that the wind or sun that we had in the fall of the year did not dry it as in other falls; it did not reduce the moisture down below 16 per cent. Then again, if you remember, our first cold days in December, the thermometer dropped to zero. The corn with 20-23-24-25-26 per cent. or more moisture would not stand heavy frosts. Why? Take for a simple illustration: Take an earthen vessel of any kind, or glass that is spherical in form, bowl-shaped, if you like, and fill it with water and set it out on a night when it is cold. Is it going to be intact in the morning or is it going to be broken when the water expands with the frost? Now if you have twice as much water in that corn as it is intended to hold, what is going to happen? You will find the corn badly frozen, the kernel on the ear, when dried, will be shrunken and dry, or it may look blistered—checked. You may notice in taking up an ear that the little 'cap' on the kernel has become loosened and you can remove the whole skin with your finger. When the corn was immature, and had too much moisture, the frost came. These were the results.

Normally we can take care of corn without a great deal of trouble, but we do not take care of corn as we should do. Some of you heard Mr. Gearhart

yesterday speaking of his experiments of drying and curing seed corn. He found that the best corn was secured by a selection of the ears at the proper time, at the time of husking, when it is ripe, taken and stored in a well-ventilated place away from all frosts. Seed treated in this manner yielded five bushels to the acre more than corn picked out of the centre of a crib. That means ten acres will yield an increase of fifty bushels. Further than that, if we are sowing seed corn and we hope to have a crop, we cannot afford to plow the land. Hire a man to do it, or make an extra rush in the fall. Maybe get a government tractor to do the work, and the next spring buy a new cultivator, or a new disc harrow perhaps; make a special effort to cultivate the soil and prepare a seed bed; spend our time cultivating that field, harvest it and then miss five bushels to the acre because we did not take care of our seed corn properly. All that work could be done just as well for a yield of five or ten bushels more, from year to year.

We cannot afford to let any season go by without taking our seed corn—all we want for ourselves for two years—and putting it away from frost and drying it properly. If everyone had done that in 1916 there would be plenty of seed for this year. I say, *keep two years' supply of seed in spite of everything.* Do not trust to luck. You cannot afford to do it. We must look after and care for our seed corn every year. I want to drive that home!

People ask "Can you get any 1916 corn?" There is some available, and even the 1915 corn which was properly cared for will germinate better than 1917 corn.

In caring for corn there is one thing to remember: the moisture contained should always be below 16 per cent. That means you must get it as dry as possible, get it away from the frost and where there is a good circulation of air. I want to say here that the 1917 corn that has been left in the crib this year, and I can say it absolutely, no matter how mature it is, will not grow this spring. I have seen lots of it, so has everybody else. If it will not grow what will we do about it? There is a large amount of seed corn being shipped in from the United States and the question is: 'Will it grow and ripen here?' 'Will the corn shipped in here to fill our shortage meet our conditions where we depend almost entirely on husking varieties of corn?' I cannot say they will. Mr. Gearhart tells us that there is a shortage in Ohio, Iowa, Wisconsin. If we can get corn from the States to fill our requirements we will do so, but I do not think there is much hope; but there is a lot of late corn coming in for ensilage purposes—pretty good corn—and those who are growing for silos will be able to get that seed. But as to saying there is a large amount of corn coming in, of varieties that mature here, to relieve the seed corn situation, I cannot assure you anything of the kind.

I do not want to take up much time discussing the question as to what we are going to do if we cannot get corn. I will leave that for Dr. Zavitz; but I want to say this—that I want every man here, every man in this Province, who thinks he has seed corn, to test his corn.

Last year was a bad year for the southern part of Ontario. We do not know what the spring of 1918 is going to give us. We say we are short of help and we are right. Then you or anyone else cannot afford to prepare corn ground for seed corn and find at planting time that you have no corn to plant and you thought you had. You cannot afford it from a dollars-and-cents standpoint. This nation cannot afford it and the boys at the front cannot afford to have the land go idle next summer. For this reason when the time comes to plant corn and you cannot secure seed corn, plant barley and oats in mixed crop that will give

you yield and feed to replace the corn crop to feed your hogs and cattle: you cannot afford to have the corn acreage to go idle.

Referring to the testing of seed corn, I am prepared, just as soon as you like, to test any seed corn that comes in here from any farmer or farmers' association, no matter where it is sent from, of Ontario varieties or any other varieties of corn, that I may help you out in the matter of meeting that situation and finding out the value of your seed. I want to state that for reasons I have just stated, finding out if you have seed or not and finding out what it is worth. If your corn only germinates 50 per cent. you should not put three or four in a hill as normally, but double that quantity. The only way to determine that is to test the seed. Every farmer should test it himself. I do not think there is anyone present who cannot meet the situation, but for fear there are some who cannot, and for fear there are some conditions that arise that may puzzle you, I will do it for you. I would rather you would do it: it is more satisfactory to you. You see the ears you took the kernels from and know the conditions under which it is grown and you will get more good out of it than to let someone else do it. That should be done any year, but it must be done this year.

One method of testing seed corn is to take the ears of the seed corn that you expect to use. Do not take the kernels from the butts or from the tips, they will perhaps be the drier ones and stand the best chance of germination; take one kernel at least out of the centre of one side of the ear: then turn that over, and take one out of the opposite side; also take one from near the butt and tip. Take at least four kernels from each ear. If you wish us to make your test, label these ears and put them away. Bring the kernels in to me and I will give you the result of the test just as soon as I can. But whatever you do, make sure to test that seed corn.

Q.—What temperature would you have for the corn when testing?

A.—Around 60°.

SOIL IMPROVEMENT.

H. G. Bell, Agronomist, U.S. Soil Improvement Committee, Chicago.

It affords me great pleasure to attend, for the first time, the Chatham Corn Show. I come not exactly as a stranger to Ontario, since I was born here. I come to greet my neighbors again.

I compliment you on your corn show. The world is looking to Canada for greater production. Many people think that your neighbors to the south are a little behind the times in regard to preparations for the world struggle, but they are now making most energetic preparations. I am glad to say that the land of my birth has shown the lead. I have always had the highest kind of pride in that part of the nation which has taken such a prominent part.

Now supporting the fighting men, there must be a sufficient force of men behind the lines. The men of the farms have been called the men in the second-line trenches. I know they are proving a very important unit in this great hour.

We used to study history when I was a boy like these boys in front. I remember studying a great deal of history of Dufferin County, my home. We are going to study history written in a different way to-day. I shall illustrate my remarks by these charts.

Prof. Bell proceeded to describe the different soils—clay, sand, muck, and loam,

which differ in weight, color and composition, and continued: The difference in the size of the particles composing the soils is important, because upon it depends the amount of moisture in the soil. Water is the most important thing in growing crops. No matter how much tillage you give soil, no matter what good seed you put on the land, without a supply of water you cannot have a good, thrifty crop because water is the carrier of plant food.

Plowing, discing and harrowing the fields in the spring prevents the surface waste of water, and assists its being held where the plant feeds. Drainage is necessary to remove the superabundance of water in the spring. It is an investment the high-grade farmer cannot avoid maintaining if he is going to get maximum results from his soil.

Prof. Bell also showed charts of the different soils, comparing the relative size of grains, or soil particles, composing them.

He then asked: How much water does our average corn crop require? One pound of dry matter in corn requires 450 lbs. of water. That is, for every pound of dry matter in corn there is required 450 lbs. of water from the time the corn is planted to the time of its maturity. Oats require 500 lbs. of water to one pound of dry matter, wheat 450 lbs., potatoes 400 lbs. This supply of water may be stored up by deep fall-plowing, and storing the soil with humus, which is rotted straw stubble or anything that is of a plant nature which is worked into the soil. It is of great importance, because humus catches and holds water, which carries plant foor in solution.

He then demonstrated this fact by blue water poured through humus and through sand. The water, after going through the humus, was of a whitish color, while that passing through the sand remained blue.

Humus binds sandy soil together, aids the soil to hold water and forms the home and food of free bacteria. It opens up heavy clay soils, but binds together the sandy soil.

He then went on to explain that by "bacteria" he did not mean disease germs but the life element in the soil. Soil bacteria require certain conditions of soil There is a condition of soil that will not produce legumes of any kind to best advantage. You can recognize the spots in your fields. Where you notice sheep-sorrel or moss the soil is usually sour. How can this be remedied? By liming.

An experiment was then performed of placing litmus paper in a solution of water passed through sour soil. It changed the color of the blue paper from blue to pink. The discolored portion then immersed in a solution of lime regained its former color. Lime added to sour soil neutralizes the sour condition and makes it favorable for soil bacteria. Sourness is frequently due to poor drainage.

Q.—How much lime should be used to sweeten land?

A.—In the west they are using from one to two tons of limestone per acre. There are three kinds of lime in common use: burnt lime, hydrated lime and ground limestone. Marl, also which contains a considerable amount of lime is a great asset. This is found in certain sections of Ontario.

The first thing for the Canadian farmer to do next spring is to get his soil in the very best shape for the growth of his crop. It is essential that the *home* of the plant be properly prepared.

Now, beside having a suitable home, the crops must have suitable *food*. Potatoes and corn are not sensitive to acids in soil as are some other plants. If yau plow under a second crop of clover and allow it to rot it will produce the slight tinge of acidity desirable for potatoes.

A diagram of a corn stalk, each of the leaves of which plant represented a manufacturing plant, was then displayed. The roots are the railways that convey the plant food to the manufacturing houses or leaves. Here the plantfood is worked up into material, that promotes the growth of stalk, leaves and fruit.

Every plant is made up of eight necessary constituents, and four unnecessary. The necessary composites are: *Water, sulphur, iron, magnesium, lime, nitrogen, phosphoric acid, and potash.* Nitrogen causes the corn plant to grow. In its pure state nitrogen is a colorless gas. Nitrogen is never used by the plant in the gas form. Some plants, like clover, have power by virtue of nodules on their roots, to take some of the nitrogen out of the air and put it into the soil. The little knots on the roots of the alfalfa and clover, contain bacteria which harvest the nitrogen supply and when a field of the same is plowed under, this supply is released into the soil again and fits it for better work in growing the following crop which requires nitrogen. Nitrogen is the kind of plant food which causes plants to grow. Phosphoric acid causes plants to ripen. If your soil is lacking in this element, your crop will be slow maturing and poor in quality. Potash is the plant food which gives the corn plant strength. It gives the plant strength to resist disease, and helps in forming starch in the grain or potato. Then the plant must have the plant grower, the plant ripener and the plant strengthener.

Where do these plant foods come from? Our soils contain varying amounts of these materials. When the soil supply of any or all of these necessary foods fails, they must be supplied from outside sources. Stock manure is the first great source. Manure, which has been protected from rain and snow, contains the highest percentage of all three plant foods. If manure is exposed to rain and snow, the run-off water carries away at least half of its value. Phosphoric acid is always short in manure. The addition of from 40 to 50 lbs. of acid phosphate to the ton of manure overcomes this weakness, and balances the plant food of manure.

The next source of plant food is fertilizers. Europe has been using fertilizers for over 100 years. In the Eastern States they have been using them for over 50 years, but in Ontario they have been using them for a considerable shorter time. Fertilizers are carriers of just the same plant food as is carried by manure, but in a more concentrated form. They carry the plant-grower, plant-ripener and plant-strengthener. There are various fertilizers for various crops on various soils. Fertilizers supply available plant food. They are made from the by-products of packing plants, products of the mine and rock deposits of the Southern States. Potash at present comes from local sources. Fertilizers are carriers of available plant food. They give the crop a quick start and hasten its maturity.

Soil analysis is not a safe test on which to decide on fertilizer treatment. It tells the total store of plant food in the soil but it cannot tell what of this total supply the crop can use. Intelligent experiment by the farmer himself, on his own farm, is the best means of finding out what fertilizers pay. If you have a sandy soil you know that soil is short of all three essentials. If you have a clay soil, you have a pretty good supply of each plant food. However, continuous cropping will have materially reduced the supply of available plant food. If, you have a mulch soil you know it is long in nitrogen, and you can get good straw but not good mature grain. You can grow hay on muck soil because nitrogen which causes grass to grow is relatively abundant. But grain, which you do not harvest until mature, requires something which leads to its maturity.

If fertilizers pay they are a good thing to use, if they do not pay, no recommendation of mine or of anyone else will lead a man to use or test them out.

Fertilizers are carriers of plant food and plant food is available when there is sufficient water.

Fertilizers should not be placed on top and plowed deep into the soil, but should be worked in about the depth of where the plant feeds.

The speaker then quoted figures from bulletins published in the United States, regarding results of experiments with and without fertilizers, showing a marked increase in production on the fertilized land.

With soil formation, humus, and the proper liming of the soil the home of the crop is correct. By using fertilizers to make up the deficiencies in the necessary plant food constituents, you cannot help but get best results.

To summarize, the speaker showed a chart of a bridge over the stream of failure. The basic stones being fertility and marketing, and the arch stone being business management, and the intervening stones being manuring, fertilizing, liming, efficient machinery, tile, efficient help, suitable live-stock, and sufficient water, together with crop seed selection, which are the essentials of successful farming.

FERTILIZERS—WHAT THEY ARE AND HOW THEY ARE MADE.

H. G. Bell, Chicago, Ill.

Some sixty lantern slides were used to illustrate the speaker's remarks, which are practically a continuation of his lecture in the afternoon. He said in part:

I spoke of food as the second thing in importance in winning this war. On the other side of the line we speak of the farmer as the man in the second-line trenches, but I am not sure that he is not the first, because the army cannot go forward except as there are materials to back it up.

Have you any idea what it takes to ration a great force in arms? Say a force of nine million men? Figuring it out on the basis of meat consumed, alone, it takes 30,000 beef animals a day or 250,000 sheep. These are only meat rations. There are also vegetable rations, which are served in some parts of the army, and that must amount to millions of tons every month.

The food of the army, and for the great army of people who remain at home, must necessarily depend upon the farmer's success in handling the soil and crops at his disposal. Food production depends on two groups of circumstances, first the home of the crop, second its food. The soil must be prepared so that it is in condition to receive the seed. There must be a sufficient supply of both humus and lime. Lime is not a plant food but is a soil sweetener. Some people say, "I am fertilizing with lime," that is a misconception. You cannot fertilize with lime. Lime corrects the sourness of the land only.

Pictures were then shown of soil formation and types and development of plant life from its earliest stages down to the types of to-day.

I emphasized this afternoon the necessity of water for crops. Water is the carrier of plant food. The plant has not the power to use the solid nutriment in the soil except as it changes to liquid form. I spoke of the constituents of plant food, and I dwelt on the three most important: nitrogen, which is the plant grower, phosphoric acid, which causes the crop to ripen; and potash, which is the plant strengthener. These three plant foods must be soluble.

Pictures were displayed showing the improper and the correct ways of handling stock manure. Manure is one of the best aids to soil, because it supplies much humus as well as plant food. However, for grain crops the plant food is unbalanced.

Manure on grain crops will produce a great quantity of stalk but a light crop of grain heads. 40 to 50 lbs. of acid phosphate to the ton of manure makes up for this weakness in manure. Manure should be protected from rain and snow, otherwise a large percentage of the good in it will be carried off.

Legume root-nodules contain bacteria. These bacteria live on the roots of the legume, and in return for their living they imbibe nitrogen from the soil-air which they store in the soil. This accounts for soils becoming richer in nitrogen after growing legumes. These nodules or legumes as we call them, are one agency by which food is obtained by the plant. Another source of food is fertilizer.

The speaker proceeded to explain the processes by which fertilizer manufacturers procure their raw materials. The three important ingredients are ammoniates, phosphoric acid and potash carriers. Phosphoric acid is obtained from bones and from acidulated rock. Potash, which prior to the war was secured from Germany, is now obtained from various sources on this continent.

A plate showing nitrate mining in Chile from which nitrate of soda is obtained, was next displayed.

This material is mined, dissolved and recrystallized. It is the purest form of nitrogen salt. Strange to say, the war is competing with the plant food industry for nitrogen carriers, since they form the basis of high explosives. This circumstance accounts for the great scarcity in nitrogen-carrying materials.

Blood and tankage are also carriers of nitrogen in fertilizers—this is the salvage from the abattoirs. This material is placed in tanks and boiled, then the water is drained off the material and is put in presses and the liquid is pressed out. The solid becomes stock feed and fertilizers. There is not enough tankage to go around. Also there is not enough nitrate of soda to go around, so manufacturers turned to other sources of carriers of nitrogen in the form of ammonia.

In preparing coal for smelting steel it was found that the presence of ammonia was undesirable in the coal, hence it was put through a process by which ammonia was driven off. This cooking process took away the ammonia but it was driven into the air and wasted, hence the old method of cooking was a very wasteful process. The steel industry discovered another process whereby the ammonia could be saved, in the form of sulphate of ammonia. This salt is used in fertilizers.

Another carrier of ammonia used in fertilizers is cyanamid. The cyanamid manufacture makes it possible to obtain nitrogen so long as there is nitrogen in the air and so long as there is water power to operate machinery. This disposes of nitrogen gatherers and nitrogen carriers.

Leibig, the great scientist, discovered that bone could be ground and acidulated so that it became soluble plant food.

Lawes, the English scientist, took out the first patent for making superphosphate in 1842. He also founded Rothamsted Experiment Station.

There wasn't enough bone to go around, so the industry had to turn to the rocks of Carolina, Tennessee and Florida. Phosphate rock is mined in Tennessee and found in pebbles in Florida. The phosphatic rock is ground into a fine dust and is treated with sulphuric acid. Sulphuric acid is made from iron pyrites which is normally found in Spain.

The speaker then proceeded to illustrate the process of making sulphuric acid. He explained how the sulphur gas is mixed with ground pebbles. When sulphuric acid is mixed with phosphatic rock a strong chemical action takes place, and acid phosphate is formed.

Potash is the plant strengthener. The United States Government and the

Canadian Government have scoured the country for sources of potash and they have finally located some in seaweed which gives a percentage of potash. This seaweed cannot be pressed as it is mucilaginous and would not go through the press. You can see the salt on its leaves. That is potash.

Alunite rocks in Utah, bear considerable potash. Another form is obtained from the water of lakes in Nebraska and California. The cement industry contributes some potash.

For every barrel of cement manufactured there is said to be a by-product of 1½ lbs. of potash salt. In the United States, we used, before the war, practically 3,000 tons of potash a day. The total product from the different sources last year was less than 40,000 tons. So we are far from solving the problem of potash scarcity. They say that this year there is a possibility of getting nearly 80,000 tons. But there will still be a shortage.

He then showed and explained the machinery in a modern fertilizer factory as displayed on the screen.

There are different kinds of fertilizers for different crops and soils. A potato fertilizer will carry a relatively high amount of potash, and one for corn will carry a relatively high proportion of nitrogen and a small one of potash.

The interior of a factory chemical laboratory was next shown. Here the ingredients are analyzed and here the finished product is tested to see that the proportions are correct. The raw product is analyzed to find out what is in it and the manufactured product is analyzed to know that it measures up to the requirements established by law.

The proper application of fertilizer is essential. A drill with fertilizer compartment is the best way to apply it to grain. Potato or modern crop planters have fertilizer distributing attachments. Some successfully apply fertilizers with a lime broadcaster.

THE IMPROVEMENT OF THE CORN CROP.

C. A. Gearhart, Ohio Experiment Station, Wooster, Ohio.

We in Ohio have the idea that Canada was so much farther north that you would not be able to mature some of the varieties of Dent corn, but I find that you have an excellent exhibit, considering the season which you have gone through, and it compares very favorably with any of the corn shows I have attended in Ohio, and we consider ourselves as prominent among the corn-growing States.

There are a few conditions here that compare with those in Ohio, which I would like to deal with. Last year, in the latter part of October we had a very severe freeze which stopped the growing of practically all our corn. You had that same condition in Ontario. Later, in November, December and January, conditions were even more severe. On the 9th of December the Ohio thermometer dropped down to 8 below zero and the next night to 9, the next night was 19, then back up to 8, and during these four days the thermometer at no time was above zero. With the corn having a high percentage of moisture as it did, owing, no doubt, to the wet months of September and October, and the cold in November, there was something bound to happen, and it has happened. If you will only look over the ears from an ordinary field, you will find that a great many individual kernels will show that the germ has been frozen.

With this condition in Ohio, the Experimental Station sent out a news letter to all the papers explaining this situation and asking that the farmers send in

samples, one kernel from each of a hundred ears, and we would germinate them. We received fourteen hundred samples to date. Out of these, 80 per cent. were taken from the crib and 95 per cent. of that lot tested less than 40 per cent. That does not look very bright for the farmer who did not get his seed corn in and dried thoroughly before the cold weather came. About 18 per cent. of what we receive was seed taken by people and placed in warm rooms before the cold weather. That 18 per cent. tested 94 per cent. We were well pleased with them, but think! It was only 18 per cent. of all the corn we received, and I venture to say that not 20 per cent. of the Ohio farmers had taken that precaution. Just 2 per cent. of the samples received were old corn, 1916 crop; it averaged 87 per cent. germination.

This year the Ohio College of Agriculture conducted a test to see what the effect of freezing had on the germinating qualities of corn. Several hundred ears were selected from the field, and then the ears were divided, tip and butt, and also divided according to moisture into four lots. Then the tip ends of the ears were placed in cold storage for three days, and at the end of that time both the butts and tips were hung up in a warm room to dry out. At the end of six weeks they ran a germination test on both lots and found the butts showed a uniform test. The tip ends which had been subjected to cold, 2 degrees above zero, showed a wide variation, varying as to per cent. of moisture at time of freezing. The sample with 18-20 per cent. moisture tested 91 per cent., the one with 21-23 per cent. dropped to 51 per cent. germination, that containing 24-26, tested only 35 per cent., while the sample with 28 per cent. or more of moisture failed to show one kernel to grow. I venture to say that not more than 20 per cent. of the Ohio corn was put in the cribs this past fall with less than 30 per cent. of moisture.

The butt end of the ear tested up very much better than the tips. They had simply piled them upon the floor while the tips had been for the three days in cold storage. The main effect was that the cold temperature affected the germination.

Where can we get good seed corn? It is on everybody's tongue in Ohio, Illinois and everywhere in the corn belt of the States as well as here. In Ohio we have made it a rule that the farmer must hunt his own seed corn. There are several places where it can be got. (1) From a few good cribs that were shown by our investigation. (2) The 18 per cent. of farmers who saved their seed and dried it. (3) From the old corn crop of 1916. That corn did not germinate as high as we would like to have it, but if each farmer would take it upon himself to select his own seed by conducting a germination test from his own corn and the corn of his neighbors, he has fair prospects of good seed. It means that the man who really uses good corn may have to test ten to fifteen bushels. This can be done very easily and without any great expense or time, by a simple method. Take a strip of cloth 8 to 10 inches wide and about 2 yards long, mark a line through the centre from one end to the other, then make marks every 3 inches crosswise. Take six kernels from different parts of the ear and place them on a block, and mark the ear with a mark corresponding to the mark on the cloth. After filling up the cloth, roll it up and soak it for four or five hours. Then lay it away, keeping it moist, for four or five days and discard those ears that do not germinate.

I have suggested to a number of men here that it pays to divide these ears into lots that test six strong, five strong and four. From there down feed

it. Do not use it for seed if it germinates less than four strong. If you are not able to get six strong kernels for seed, use some that germinate only five, but do all you can to secure those that germinate six.

In summing up the test, for the time it took to test the germination qualities we have found in the past years that the man who received 35c. an hour for his time showed a return of $1.10 per hour for the time they were working on the germination test. This is not a story. This is actual results. Time spent in testing the germination of your corn is time well spent.

Why do we place so much emphasis on germinating your own corn? We carried on experiments of this kind for twelve successive years. One kernel to the hill gave us 35½ bus. per acre; where we had two kernels, 48½ bus., fully thirteen bushels increase. Where we had three kernels it increased to 50.75 bus.; four kernels, 62.11; five kernels, 60.50 bus.—a decrease, you see. These tests go to show that there is a possibility for you to do the same by conducting tests on your own farm.

I think the people connected with the experimental farm will agree with me that we are not always able to say just exactly what our inquirers should do. We can only drop hints and leave it to them to put them into operation.

The number of plants per hill will vary according to the difference in your soils and the amount of lime, tile-drainage, fertility and so forth. These are things you have to solve for yourselves.

When shall we plant? What date? We have conducted tests now for eight years, with regard to different dates of planting which will, I think, apply very closely to conditions in Ontario. One plot was planted between April 26th and the 29th, another two weeks later, between May 4th and 10th, another May 14th-17th, still another May 25th-29th, and the last plot June 2nd-5th. We found the plot planted the latter part of April gave us a yield of 61½ bus., that of May 4-10, 64¼ bus., that of May 14-17, 65 bus., that of May 25-29, 52.64 bus., that of June 2-5, 41 bus. So we learned that we lost in yield as we waited from May 15th on, and in our experiment we lost 24 bus. in yield by planting the plot of June 2-5th. It costs just as much to prepare your ground and cultivate it. Last year we ran a moisture test on the corn of these different plots. The later you plant the more moisture the corn contains at harvest time. Taking the same dates of planting as in the last experiment—planting April 26th-29th—it tested 39 per cent. of moisture, planting May 4th-10th, 42, planting May 14th-17th, 45 7/10, planting May 25th-29th, 49, planting June 2nd-5th, 57½. If you have to feed this water you can get it cheaper by pumping it from the creek than by cultivating.

The following test was conducted this past season at the College of Agriculture, Columbus, Ohio:

They made a composite sample, dividing it into three lots:

A. was planted May 14th, B. planted the same date, C. planted June 4th. Twenty shocks were used from each, and the figures are the average of the 20. A. was cut on September 17th. B. was allowed to go uncut, and was killed by frost on October 9th. C. was cut the 9th of October. All were husked on Oct. 26th. In other words, A. had 126 days from the time it was planted until it was cut, B. had 146 days from the time it was planted until it was killed by frost, and C. had 127 days from the time it was planted until it was cut on October 9th. A. planted early in the season and the end of the growing season cut short, B. was allowed to go on until frost, and with C. the early part of the season was cut off. The moisture of A. was 33, B. 36, C. 46. B. had a

larger percentage of corn than cob, C. had a larger percentage of cob than corn. When the tests as to germination were carried on, A. germinated 68 per cent. strong, B. 58½, C. 36.8. In other words, the germination was higher for the corn which had the latter part of the growing season cut off than where the first part was shortened.

If we go into our fields and select our seed corn before the extreme cold weather, even if the corn is somewhat immature, we will not have this present seed corn condition. The corn cut off at the end of the season germinated 68 per cent. If we had saved this seed we would have had our own seed corn.

Where shall we store it? We have used eight different methods of storing our seed, as experiments. First, we placed some on racks made of 2 x 4 scantlings, some we put on the floor over the corn crib, others we bored a ⅜-inch hole in the cob and hung them up; still others were thrown into a wire basket and placed in the centre of a corn crib. In Ohio the average farmer gets his seed corn after he is through with his feeding operations. Of course you do not do that here? Some we hung up in a warm room in the barn, and another lot we hung up in the furnace room, while still another lot was buried in an oats bin, to take out the moisture by absorption rather than evaporation. In the spring we took out our corn, using only the ears germinating strong, and planting five kernels in each hill later thinning to 3 kernels per hill. The plots were all prepared under similar conditions and received the same attention. The results from the corn on the rack in the crib, 57.6 bus. per acre; on the floor, 57.4 bus. per acre; with the cob bored out, 58½ bus. to the acre; in the corn crib boarded up as the average farmer stores his seed corn, 55½ bus. per acre. In the warm room where it was dried out before the cold weather set in, 60.01 bus. per acre; in the wire box in warm room, 59½ bus. per acre. Hung up in the furnace room, 60.6 bus., and in the oats bin, 55.8 bus. per acre, about the same as in the corn crib. What do we get from this test? You are able to increase your average yield by over four bushels per acre by storing your seed properly, and you incidentally do away with just the conditions you are up against at this time—this seed question. You select your seed and place it away in a dry room above the kitchen or some place of that nature where it dries out thoroughly before freezing weather, you will be sure of good seed corn.

In the way of conclusion allow me to sum up my statements in the following:

1. Every farmer should make a germination test of every ear intended for seed.

2. Plant the second or third week in May if possible.

3. Corn shows a better yield when allowed to mature. Corn given the same number of days to grow, but at different seasons, shows a better germination when the later part of the season is cut off than if the first part of the season is shortened.

4. Drilling gives higher yield than hilling, but requires more labor to control weeds.

5. Select seed corn early and dry at least twice enough for your own use each season.

6. Store seed corn where it dries out thoroughly (less 20 per cent.) before freezing weather.

Q.—When do you take it that corn is dry?

If you get it below 18 per cent. of moisture you will have fair corn.

THE CORN SITUATION.

J. F. Cox, Agricultural College, Lansing, Mich.

That the food situation is equally as important as munitions has been pointed out by the economists, and driven home. North America must produce sufficient foodstuffs for England, France and her Allies, as well as for her own people.

The corn situation is of the greatest importance. It is the greatest grain crop in the world. We hear so much about the necessity for wheat that possibly we thought wheat was the greatest world crop. But the corn crop is greater in weight than the wheat crop, and 80 per cent. of this crop is produced in North America. Canada and the United States are the chief producers of this great world crop.

The call abroad is for wheat—we must get the wheat over. It means that we cut down on our consumption of wheat, that we substitute that with other crops. And the chief crop we are substituting it with is our corn crop. France, to-day, is anxious to take up the corn crop. England has asked us to send wheat and eat corn, but France plans to eat corn. The difficulty is that corn meal cannot be shipped without spoiling and they do not have adequate mills, so we must mill it here and send it in that state.

Pork and beef are necessities over there. They want us to produce more. Pork and beef production depend entirely upon the corn crop. Anything that threatens our corn crop threatens the shipments of meat, fat, wool and leather that this country can make. About next April or May the farmers, as a whole, and the people, as a whole, in the United States, will be brought face to face with the extreme lack of seed.

In Michigan our surveys show that we will not have more than one-third enough home grown seed to plant the State. Allow me to present the survey of the situation in the United States. The Northern States have been the hardest hit. If the German propagandists had planned a campaign inimical to the corn crop they could not have done better. Our seed was gotton in late and the summer season was one of the coldest we have experienced. We had early frosts on immature corn and it did not dry out. We had heavy freezes in November and December that practically ruined the corn in the fields. We have had an extremely cold winter, which has damaged even well-stored corn. These causes have brought about the dire seed situation.

In Michigan, surveys established the fact that there is no county in Michigan which has a surplus of seed. In Wisconsin the condition is very similar. They were the first to call on us for seed. They have been doing what they could to meet the situation and get corn from other States. They have not enough seed for there own planting and hence have none to spare.

When I saw how the situation was in Michigan last fall, I went over to Wisconsin and Minnesota. They told me there that I could get a good supply of corn, but when the freeze came it ruined their corn as seed, and there is only a small area in western Minnesota that has seed corn to spare. Even that has got to be hand-picked.

North Dakota shows probably the greatest shortage in the States. South Dakota has a little corn in the southwestern section. Iowa has placed an embargo on its corn, and North Iowa will not have seed. Illinois, which competes with Iowa as the first corn State of the United States, has placed one million dollars at the disposal of the Seed Corn Buyers' Committee at Chicago, with a price scale. This committee is trying to buy corn for Illinois farmers. Indiana authorities

discourage the export of seed from the State. The Indiana farmers are coming up into Michigan to try to get seed corn. Ohio is not at all secure in the southern part and there is none at all in the northern part. Pennsylvania has a small supply. New York has about fifty thousand bushels of Flint corn in excess, and the New England States have a little.

The Seed Supplies Committee of Washington, D.C., telegraphed to me that there was no place in the United States where Michigan could get suitable seed corn. We purchased where we could in small quantities. It did not amount to a great deal. We have secured possibly 15 cars of Flint in New York, and our buyer cannot get any more. The seed companies have bought up some and I feel there should be a place for it, as an early maturing corn in northern sections. We got several types from them—Yankee Dent, for ensilage, eight or ten more Flint varieties for grain. Pennsylvania can offer no early varieties and but a small supply of corn for silage purposes from South Eastern Pennsylvania. From Southwestern South Dakota early maturing varieties can be secured from their seed companies in limited amounts.

To secure enough corn that will mature—corn of the early varieties for the northern sections is impossible. We cannot do it. We will have to face this shortage. The first problem before us is to make the most of what we have on hand. Every bit of corn that will make seed must be saved for that purpose and carefully protected, as an ammunition supply is protected. Every bit of old corn must be rounded up and tested for seed. Sound corn of 1916 offers a fine source of seed wherever it can be found.

I got some corn from one of your seed firms in this Province, a Walkerville concern, that handles its seed along approved lines. They got it in before others and got it into drying sheds and properly heated, but even then it was under 73 per cent. Another fact I admire about that firm is that they have not taken advantage of the opportunitiy to get a big price for corn. I know they are not the only Canadian firm that has not taken advantage of the opportunity to profiteer. They sold what they had at $4 a bushel. They did not raise the price, though they could have got double.

The average of 340 samples tested in Michigan was 47.9 per cent. Corn taken from the field, in a great number of averages, comes to 5 per cent., so we cannot look to the field corn to help us. Samples taken from the inside of shocks tested for germination 6.47 and outside samples tested 4.7. It did not make much difference whether it was taken from the inside or outside: it was killed by the frost: and crib corn comes out at an average of 10½ per cent. Even field-selected and properly stored corn gave an average of only 73.5 per cent. germination.

We are trying to get all our men who have corn to test it and make it their business to select all ears that will make seed. Some of our supplies will run maybe a quarter of good seed corn: the germination test will bring out the sound ears. It is trouble, but no great expense, in consideration of the crop, to select our seed and test it. We are pushing that measure through schools, farmers' societies in the State, and the Farm Crops Department are making tests of all samples sent us.

There are a number of special agents out on this same thing. There are great arguments as to whether the sand box, the earth box, or "rag doll" methods to test germination, or any one of a dozen other ways, is best. And after all, the fact is, they are all effective and all give results. In ordinary years we recommended the grading of corn, discarding all butt and tip kernels. This year they will be used, for they will make good silage. We will grade our corn just the same, but we will plant the butts and tips separately. They will yield practically as well

as those kernels from the centre of the ear. They do not start so well, and do not mature as uniformly, and should be seeded thicker. By tips I don't mean chaffy kernels: these are no good for seed.

These are our first lines of defence—making the most of our home-grown seed, getting the best seed corn we can from our own crop. In the United States we are making embargoes on corn, and in Canada I understand they are taking the same precautions. Seed corn here will do better if grown here.

I have been speaking along the lines of the varieties we know will mature. The varieties that make the most for ensilage, for hog feed and for human consumption. For the silo we can get big types that will fill the silo, but they will not give the amount of feed material per acre. They are not as rich, but nevertheless there is no crop, other than corn, that will take its place as effectively in the northern countries, so we can call on the corn belt varieties of Southern Indiana and Iowa and Missouri, Kansas, Nebraska and Kentucky. Good germination is a prime factor.

Many of our farmers are saying they can only secure enough seed for half their corn crop, and they aim to add barley to supplement it. Barley is the next best grain substitute for corn. As a feed it is almost as good. It is a good summer feed for hogs, for growing pigs and for topping off. We must fall back on barley to increase our grain production. That is our second line of defence.

Oats also will be planted to greater acreage than ever before. Some other crops are worthy our attention. Oats and peas will come nearest to taking the place of corn for ensilage, than any other crop. Beets will also be good. It is certain that throughout the northern section we are not going to secure enough good seed. We will have to resort to makeshifts to meet the situation. We must give attention to the conditions under which we plant our seed this year. Last fall very little land was fall-plowed. You know the reason! The weather was not fit. It will depend upon our spring weather whether we will be able to prepare our land early. It is highly necessary that we prepare the land early for corn and and that we plant early, because we must plant varieties that are too long in season, in many cases. In planting this year, special effort should be made to fit the land early and use fertilizers which will help the crop in hastening maturity. I think you are all familiar with the use of phosphoric acid. All phosphoric acid carriers hasten the growth of corn. Nearly all seed men use high phosphate fertilizers in order to secure sound corn. The prices of fertilizers are very high. They have increased 50 per cent. to 100 per cent., but the prices of crops have gone up from 100 per cent. to 200 per cent. Never has it taken the price of so few bushels of corn to pay for fertilizer used.

And in dealing with the corn situation we must look ahead. I am certain that we will find it will take us many years to recover from the loss of splendid varieties due to adverse conditions last year. I know some farmers who have completely lost the strains they have had for years. Let us put in the silo the imported types and plant for grain and seed the home-grown types. If we had gotton together and selected in the fields the corn that stood in late September and October, and taken it in and properly treated it, we would have had enough for all. Those who selected their seed from standing stalks before freezing and properly cured and stored their supply, have sound seed. It is regrettable that so few practised this method. Let us hope that one of the greatest benefits from the bad year we have had will be that we will properly harvest, cure and store our seed in the future.

It is artificially dried corn that makes the best seed. If we have in each locality a few expert growers who understand the handling of seed corn and who own properly equipped drying houses, our seed supply will be insured.

A good shed, well ventilated, equipped with a stove, with racks to lay out the corn on, or wire hanging arrangements, is a cheap and practical equipment. There is no year when we are not faced with a shortage of sound seed in some section. The kind of work that is going on here, the proper selection and curing of corn is to be encouraged. The problem is to get enough men to take up this work, and supply, each year, the great quantities of seed that we need. When this is accomplished, recurrences of the situation that faces us now will be less likely. The next year, with late varieties to choose from, it is particularly important that we equip ourselves in preparation. We were too late to do so this year. I know a lot of drying plants were rushed into use. Many men tried to heat basements with oil stoves, etc., with little success, because they couldn't get rid of the moisture, but we will have time next summer to fit up corn-drying rooms, and make provision for the curing and storing, under the proper conditions, of enough corn for our own use.

It is a peculiar fact that to-day cornmeal is selling at a higher price than wheat. In Michigan, a national mandate went into effect commanding all the store-keepers to sell one pound of wheat substitute with every pound of wheat sold, and they found they had not enough to do it with, and they had to change it to one pound to every four of wheat, and again they found there were not sufficient substitutes in Michigan to do even this. Corn is being sold in Michigan at unprecedented prices. Why? On account of the wet condition and the high percentage of moisture contained in the corn it is extremely difficult to move it. Because of the need for railway facilities to move coal and army supplies they have held back the corn. It is impossible to get a shipment of corn for seed or food from many of the corn States. They are about to lay off moving coal and will move the corn. In corn belt States they have let their corn lay in great piles in the field, frozen. When we get warm weather it will rot if they do not move it. Chicago, Kansas City, and all our great handling points have equipped plants to dry corn and fit it, in quantity, for grinding and shipping. There is not likely to be a great decrease in the price of corn. We heard that the Western continent had produced the greatest corn crop in history—over three billion bushels. A great deal will spoil, and much of it cannot be fed. If our corn crop partially fails, or is not fit for feeding, there will be an extensive selling off of feeding stock and breeders. It will take time to recover from that. Dairy production and beef production depends upon a big crop of sound corn.

Over in the United States, I am sorry to say, we are greatly troubled by the price question. I know you have had it, too. It is regrettable that at this time the price question should come up. It is not a question of price, it is a matter of food stuffs. Our Government has set the price of food stuffs, which has apparently, in some instances, taken the profit out of the farmers' hands. And now he is asked to do even more and get along under the difficulty. He is asked to keep going even in the face of what is apparently injustice to do his part under difficulties, to do his part without recognition, without the recognition that is given to the manufacturers, and he will do it. (Applause.) I think this condition will be adjusted. In Michigan, they are giving the beet growers $10 per ton and an increase of $1 with each increase of 1c. above 9c. per lb. on sugar. That is the first real profit-sharing that is being brought about. It is the entering wedge. That is as it should be. And even if we do not get what we want, or do not get the price we should, even if we go on and produce at a loss to ourselves, we can do it. (Applause.) Because if, for lack of supplies, we lose this war, our homes and all we hold dear will not be worth living in to men of the spirit of Canadians and Americans.

FARMERS' CO-OPERATIVE ORGANIZATIONS.

F. C. Hart, Markets Branch, Dept. of Agriculture, Toronto.

I am down on the programme to speak on the subject of Farmers' Co-operative Organizations, and let me say that farmers' organizations have proved their usefulness the world over; not only in Denmark and Ireland and other countries of Europe, but here in our own Ontario.

It is not necessary, I suppose, to enumerate the many benefits of farmers doing their own business through their own organization. No doubt we are all impressed with the benefits that would accrue to rural sections of this province, or of any province, if suitable organizations for carrying on the business of these rural sections could be maintained; and there are many lines of activity open to such organizations.

Take the matter of live stock, for instance, by co-operating in the breeding of one class of live stock, or one breed of live stock there may be built up in such sections a class of live stock that will attract buyers and make that district noted for its Holstein cattle, Ayrshire cattle, for its Clydesdale horses, and so on, as some fifteen sections in Ontario are now doing.

There are also many sections in the Province which are co-operating in the marketing of live stock. For instance, one small organization in Eastern Ontario, in a district not previously noteworthy with regard to its shipments of live stock, now markets co-operatively, every year, upwards of $100,000 worth of live stock.

The fruit sections of the province are more or less highly organized. Perhaps there is no farm product more highly organized from the producers' standpoint, than is fruit, and yet only about 10 per cent. of our fruit is marketed through co-operative organizations.

Onions and other special crops are also bought and sold co-operatively. Some localities are specializing in seeds and maintain a reputation for their districts in the production of special varieties so that members have access to markets that would not otherwise be as easily available.

Too small a proportion of our farm products start on their way to market through co-operative organizations of the producers, and because of the system of marketing by individuals rather than through organizations there is, in many instances, an excessive cost of marketing. But I wish to say that a main reason for the formation of co-operative marketing associations is not for the purpose of taking some of the profits from the middleman, as we call him, because no matter through what channel our goods go to market the middleman must be adequately paid, whether that middleman be in the employ of a co-operative association or not. A main reason rather, for such an organization is lessening the cost of marketing through bettering the system and eliminating waste in marketing. Let me illustrate what I mean by this: We will take a very common commodity such as eggs. At the present time practically 17 per cent. of eggs that leave the farmers do not reach the consumer. During certain seasons of the year this percentage may go as high as 25 per cent or 30 per cent. These bad eggs cost as much as good eggs to purchase at the farm, to transport and handle, and are but an added cost of the eggs finally reaching the consumer. By co-operative marketing these bad eggs are eliminated at the source of production and thus lessen the cost of marketing to this extent and benefiting both producer and consumer.

If you will think for a moment you will recognize the fact that very few of our farm products go to market as graded produce. Apples and seeds and one or two other commodities are legally graded. Practically all of our farm products start out to market in an ungraded condition and we get so much a dozen for eggs, so much a hundred for hogs, so much a bag for potatoes, irrespective of quality, and if some of us endeavor to increase the quality with the idea of getting a better price, we find that we do not get a price altogether commensurate with the quality, the reason being, of course, that the price is influenced more by the average quality reaching the market rather than by the quality of individual shipments.

Not until many of us are doing the same thing will we run a chance of being remunerated according to the quality. For instance, the New Brunswick potato grower obtains 10c. more per bag on our market than we can get for local potatoes, the reason being that New Brunswick potatoes are of a uniformly higher quality, while with domestic potatoes, and on the other hand in spite of some shipments of excellent quality, there is a greater chance of getting a percentage of potatoes unfit for sale, scabby, undersized, and undesirable, and the buyer pays accordingly.

That is what I mean by changing our system from individual marketing to organized, systematized, marketing associations; standardizing grades, eliminating waste, and organizing the whole system of marketing.

But perhaps there is no doubt in the mind of any of us but that it would be a good thing if we could co-operate more largely in the open country. Seeing that many such organizations have proved, and are proving, eminently successful, the question naturally arises as to why they are not more commonly found on the continent of America. One would naturally suppose there must be some disadvantages which would prevent their more rapid spread over the country. My own opinion is that the reason arises, not so much from any disadvantages of the co-operative system, or its unsuitability to our conditions here, but for lack of proper business handling. So far as I have been able to inquire into failures of co-operative organizations, I wish to say that in practically every case, the cause has been a business reason pure and simple. This leads me to say that the reason why co-operative associations have not proved as successful as we would naturally suppose, is that they have been built, not perhaps on too much enthusiasm, but certainly not enough on good sound business common sense. I cannot urge upon you too strongly, therefore, that to obtain success in any co-operative venture, it is vitally important that the actual business operations be in charge of a person, or persons, who will not ignore sound business principles in all details.

In speaking so far I have had in mind the marketing of farm products. In Ontario perhaps, more co-operative business is done in the buying of farm supplies, but even here I believe much of this business is being done on a wrong basis; I refer to price-cutting.

Some seventy years ago in a little town in England, a few miles north of Liverpool, the weavers working in the mills were living at a wage that barely kept them in existence. These men used to get together and talk over their situation, and finally one night twenty-eight of them, in a little upper room, agreed among themselves that they would save two-pence a week for a year in order to get a little money together and buy their supplies at wholesale prices. They did so and at the end of the year they found that they had saved about $140. They took $70 of this and bought flour and sugar and other grocery supplies. They bought a pair of scales, rented a little store, opened the store in the evenings and took turns waiting on customers. They went themselves to the store and bought

in small lots and at the same prices that they had been used to paying all the years before. It was not an added hardship to pay the excessive prices they had been paying. When the first supply was sold out the money was used to buy more sugar and flour and other things, the members continued to go and buy at the regular retail price. The system has continued from that day to this, and from that little organization of the Rochdale pioneers there has grown up the largest commercial concern in the world. The year before the war the co-operative business in England amounted to $600,000,000 a year.

That little organization grew into a commercial concern which owns its own tea fields in India, its own warehouses, its own vessels to transport the tea to England, its own stores where it is sold, and the members go to the store and buy tea at the regular prices. They own great tracts of land in our Canadian West where wheat is raised, and they buy other wheat in large quantities. They own their own elevators, their own vessels, which takes the grain to their country, they own the mills where it is ground into flour and they go to their store and buy their flour at the regular retail prices.

During the years they have been in business, up to the year before the war, profits have been made that would make over eleven hundred millionaires. Quite true it is that because of the operations of this concern they have narrowed the margin between producer and consumer in the supplies they have been buying, but in the history of their business they have made a legitimate margin of profit in the carrying on of their work, a margin of profit that has not been dissipated by price cutting, but has remained to the credit of the business until paid to the members as a trade dividend on his purchases.

I am of the impression that if our co-operative organizations are going to take the large and permanent place in the trade of this country that they should take, we must not ignore the principle of doing business on the usual trade margin until such time as the organization proves itself able to do business on a narrower margin. In any event the profits belong to the members and however large or small they are, are returned to them in just proportion.

Substantial organizations over the Province are working on this principle. For instance, on each railway platform in the Niagara district, there are both managers of co-operative fruit associations and regular fruit buyers. On any platform the growers receive a uniform price on a given day whether he be a member of an association or whether he sells through a dealer. Both the manager of the association and the fruit buyer endeavor to make a profit on the growers' fruit. The dealer's legitimate profit belongs to himself, whereas, in the association the profit is returned to the members in proportion to the value of fruit delivered. The advantage of not going contrary to regular trade practices in this regard are many and obvious and it is not necessary to enter into details here.

The need, therefore, is for a real business organization in each community. Not perhaps a multiplicity of organizations, but one business machine, starting with the marketing of one commodity or buying supplies and branching out as opportunity and the situation warrants, until the farmers of that community have a business house so soundly built and managed that it is largely able to take care of the business needs of the community and be able also to co-ordinate with other communities to their mutual benefit. Co-operation has proved eminently successful in practically every country on the globe. The world at present is crying for mobilization all along the line. The world is crying for greater production. True it is we are working to the limit as individuals, but the time has certainly arrived

when, as producers, we should mobilize our activities, so that these activities should not result in wasted effort in however small a degree. A co-operative business in the community, acting as this mobilization centre, is therefore not only advisable but essential.

155013
Gov.Doc. Ontario. Legislative Assembly
Ont Sessional papers.
L Vol.50, pt.6 (1918)

University of Toronto
Library

DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET

Acme Library Card Pocket
Under Pat. "Ref. Index File"
Made by LIBRARY BUREAU